



SMART Interactive Displays

MASTER TROUBLESHOOTING GUIDE

Revision

Date	Author	Revision	Changes
5/31/16	MVG	1.0	Initial Release
6/14/16	MVG	1.1	Added 6065-V2 References
1/18/17	MVG	1.2	Included iQ Hardware, Updated Camera Views, Minor text Edits
4/5/17	MVG	2.0	Included 4000, E70, and Podium Displays

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Introduction

This guide is intended to help you troubleshoot most issues you may encounter with your SMART Interactive display sometimes called an IFP or interactive Flat Panel. This comprehensive guide covers all IFP's SMART has made. This guide also covers iQ hardware issues, although for software issues please visit the support page specific to your version of kapp software.

The guide itself is setup in sections, isolated to problem types. From there simply look for the issue you are experiencing, and use the troubleshooting advice to see if it solves your issue.

Please confirm your warranty before calling for support. The warranty on your product is tied to the serial number and can easily be looked up here:

<https://smarttech.com/Support/Browse+Support/Warranty+Form>

For out of warranty products, we can only provide troubleshooting assistance to a certain level. That is typically limited to the information we provide online with very limited phone support. For discontinued products we can only provide online support as per our documentation, please see below.

If your out-of-warranty SMART product needs repair, contact a third-party repair center (<https://smarttech.com/us/Support/Browse+Support/Download+Software+Internal/Third-party+repair+centers>). Please be aware, not all replacement parts are available for purchase.

For discontinued products, SMART will end customer support according to the Discontinued Product Policy and Customer Support Policy (<https://smarttech.com/Support/Browse+Support/Download+Software+Internal/Discontinued+products+and+customer+support>).

Even though customer support has ended for this product, you can continue to use our library of online support materials to find information on how to use, install and troubleshoot your SMART products.

- SMART support site (<https://support.smarttech.com>)
- SMART Communities (<https://community.smarttech.com>)

If the product requires, parts the online store for SMART Parts (<http://www.gilmore.ca/smartparts>) provides a convenient way for you to order replacement parts for your SMART Products.

How do I know the model number of my Interactive Display?

The easiest way to distinguish between the multiple models is actually fairly simple. The G3/G4 panels look very different than the G5 panels.

The main difference is color. The G3/G4 IFP's feature a black bezel, whereas the newer 6000 G5 displays feature White top and bottom bezels, and the 8000-G5 have Titanium.



The G3/G4 IFP's have full black bezels.



The G5 panels top and bottom bezels are White or Titanium.

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The E70 and 4000 series do not have the recessed pen trays like the other models, and appear as a stylish touch display. All panels have a full white bezel.



The Podiums only come in 18” and 24” sizes and are now a discontinued product.

1. Power

Please refer to the Power States explanation guide for more information about how the Power States of the display work. It can be found here:

http://kb.smarttech.com/articles/HOW_TO/Understanding-the-SMART-Board-8000i-G5-series-interactive-flat-panels-power-modes

1.1. My Display will not turn on – No lights lit

- 1.1.1. Check that both sides of the power cable are seated correctly, in the wall and in the panel
- 1.1.2. Ensure the rocker switch on the rear of the panel is turned on, follow the power cable to its location
- 1.1.3. Confirm the power outlet is good by trying a different device like a lamp or a DVD player
- 1.1.4. Confirm the power cable is good by using it to power a different device, or try a known good power cable
- 1.1.5. If using a Podium, check that the power brick is properly connected – it will show a green light under normal conditions

1.2. My Display will turn on, I can see the status lights are on, but I do not see anything on the screen

- 1.2.1. If the power light on your display comes on this is not a power issue and you need to refer to the video troubleshooting section 2.0

1.1. The Display doesn't turn on when it should

- 1.1.1. Check that all cable connections are fully engaged and that presence detection is enabled
- 1.1.2. Look for something blocking the proximity sensors. On G4 panels they are in the side bezels, near the top. On the G5 displays they are on the bottom bezel, right hand corner
- 1.1.3. If you have recently updated your Scaler firmware on G5 ensure you set the model correctly, this is found in the factory menu. Refer to your Scaler instruction set.
- 1.1.4. Test the proximity sensors by using the proximity visualization diagnostic tool in SMART Product Drivers

1.2. The display turns on when it shouldn't

- 1.2.1. Check that the Proximity Re-enable timer is set long enough to allow you to exit the room. This is found in the On Screen Display menu. It can also be disabled in the menu. Refer to the manual for your display for specifics.
- 1.2.2. If you have any lights, or forced air ductwork directly over or underneath the panel there may be a potential for interference. Try isolating this as a cause by blocking or disabling the source where possible
- 1.2.3. If your room has glass walls it may be affected by people outside of the room
- 1.2.4. The proximity detection can extend up to 5m from the display, ensure there is no motion in the path to cause unwanted triggering
- 1.2.5. Other sources of IR can trigger things, things like Plasma Displays, some IR based audio systems, and alarm systems can all be suspect but are not limited too

1.3. Display not waking from being Touched

- 1.3.1. Make sure that your press is longer than a second, and that you make good, full contact with your finger
- 1.3.2. If you are using a G5 display with a Scaler Firmware version earlier than 1.1.0.6 you will not have Wake on Touch functionality. This is found in the On Screen Display under 'About'
- 1.3.3. If you have a bright light falling on the panel it may just not see the touch at all, and it's suggestable to move to a different location or restrain the light source

1.4. Display not waking from Room Control connection

- 1.4.1. Ensure the 'On' command is being sent, otherwise please refer to section 5 Room Control troubleshooting section

1.5. Display not waking when the PC is manipulated (Started up, keyboard/mouse used)

- 1.5.1. Note that this behavior will only work if the panel is in Power Save mode – not standby for G5. G5 panels will not wake from PC in standby mode, indicated by a breathing or slowly pulsing amber 'Moon' on the front bezel. They will wake from PC in power save mode, indicated by a solid amber light. Power save mode can be enabled in the OSD.
- 1.5.2. Make sure the PC is turned on
- 1.5.3. Check that your USB cable is properly connected from the PC to the Display
- 1.5.4. If any extenders are being used, remove them and test without them to validate the system itself first

1.6. Display not waking from a Power Button press

- 1.6.1. If the power button is not showing Amber for G5 or Red for G4 Displays, ensure the rear rocker switch near the power cord inlet is engaged, otherwise refer to the Power troubleshooting section
- 1.6.2. If the buttons are lit but otherwise unresponsive, try power cycling via the rear rocker switch. Turn off, wait 30 seconds and then back on.

1.7. Display not waking when someone walks into the Room

- 1.7.1. Check the On Screen Display settings for Proximity. Ensure they are on, and the Re-enable timer is only set long enough for someone to leave the room. Refer to the admin manual for your specific display for more information
- 1.7.2. Look for something blocking the proximity sensors. On G4 panels they are in the side bezels, near the top. On the G5 displays they are on the bottom bezel, right hand corner
- 1.7.3. If your display comes up but your PC doesn't check that the PC is awake. Proximity will not wake up a connected Computer – only waking the display with touch will
- 1.7.4. If your display comes up but the video does not display, refer to the Video Troubleshooting section

1.8. Display not waking up on the expected video input

- 1.8.1. If you have an OPS installed and Video detect set to on, the OPS will always take over as the live input with the loss of video on any other source

2. Video and Other Display

2.1. My panel is turned on, but I have no image at all

- 2.1.1. If your G5 panel is displaying only a solid or 'breathing' amber light, or your G3/G4 a Red power light it has not been woken up yet – see the Sleep and Wake section for more information. Also make sure that the source device you are using is not in a standby or off state. Wake the panel by pressing the power button.
- 2.1.2. Depending on your panel, try turning on the On Screen Display menu via the control panel or remote control. If this displays, please refer to step 2.2
- 2.1.3. Power cycle your panel by turning off the rear rocker switch near the power cord, wait 30 seconds, and turn the power back on. Please note that some 4000 series displays do not have a rocker switch and you may find it easier to disconnect the cord from the wall outlet.

2.2. I have a source connected and turned on but only see 'No Signal' or 'Initializing'

- 2.2.1. Check that the selected input is the input you physically plugged into
- 2.2.2. If your Video cable is not directly connected, remove any intermediary devices in line and connect directly from the panel to your source device
- 2.2.3. If you are using cables longer than 20 feet, try a shorter cable
- 2.2.4. Confirm the cable and source work by trying them into a different display, and also try a new cable
- 2.2.5. Ensure you are trying to display a supported video resolution and refresh rate by consulting against your user or administrator guide – 1366x768 and 1920x1080 are very common.

- 2.2.6. Try giving the cable a slight 'wobble' at both the source and the panel to determine if you have a bad connection. If you do, try a second cable before assuming the panel is the issue
- 2.2.7. If using an AM30 or other OPS, rocker off the panel, reseal the OPS, and try turning the panel on again – Note that the AM30 will take a few minutes to boot up when first turned on
- 2.2.8. Confirm that the expected source is not in a standby or off state
- 2.2.9. Confirm that your OPS will support the video input you are on. While the 65-V2 and 75 models provide an OPS DisplayPort input you can only use the AM30 on the OPS HDMI input. If your OPS does not work on one input it's good to try another.
- 2.2.10. Alternatively, if the OPS supports both HDMI and DisplayPort you may find that you get a video stream on both inputs. In this case you can just set the desktop to a cloned display rather than extended.

Note: If using a Windows computer, you can shift the active window between screens by pressing the Windows button and hitting the left or right arrow repeatedly.

- 2.2.11. If you have a second panel and OPS you can always try swapping hardware to further confirm where the fault lay.
- 2.2.12. If using a Podium, note that there is an Analog/Digital toggle switch near the DVI input. Set it according to the type of connection you are using.
- 2.2.13.

2.3. One or more sources will not work in Multi Window (6075, 6065-V2, 8075, and 8065-V2)

- 2.3.1. Ensure that the video input is correctly mapping the video as expected so that the intended video input shows up in the multi window you have selected. This is found in the Multi Window tab in the On Screen Display
- 2.3.2. Confirm the source/cable works by trying a different display

2.4. When using two or more displays, my main desktop is shown on the wrong screen

- 2.4.1. Ensure the display settings are set as expected in the PC or Mac to either clone or duplicate the display as intended.
- 2.4.2. Check that the cables are plugged into the correct displays
- 2.4.3. If using a Podium, ensure that when on using a VGA to DVI cable on the input, that the video connection out is also using an analog DVI to DVI, or DVI to VGA connection. The same rule applies when using HDMI to DVI, or DisplayPort to DVI. Note you can only adapt out of DisplayPort and you will not be able to go out of the Podium with a DVI to DisplayPort connection – but DVI to HDMI will work. Also ensure the analog/digital switch is set correctly.
- 2.4.4. Confirm the video path with a known working display.

2.5. I have a DisplayPort cable connected but it doesn't show up when I select the DisplayPort input

- 2.5.1. DisplayPort is available only on the G4, 75-G5, and 65V2-G5 displays.
- 2.5.2. Please note that if trying to use an OPS with DisplayPort functionality, as with the previous statement only certain panels like the 75-G5 and 65-V2 will provide OPS DisplayPort functionality

2.6. I'm having trouble with the Video Output not displaying

- 2.6.1. Video output is available on G4 displays for VGA, and on the 8084-G4 for VGA and DVI. Newer AM30 (kapp iQ) modules will also feature video out as well.
- 2.6.2. If you are having issues with your video out, test directly into your second display first to ensure your cable and source video are ok into the display, replace either if they are not working
- 2.6.3. Check that all connections are fully engaged
- 2.6.4. If you are using a kapp iQ and have trouble with the AM30 not sending video it may be that your viewing device does not support HDCP content. All content sent via the AM30 out is HDCP encrypted.
- 2.6.5. If using a Podium, ensure that when using a VGA to DVI cable on the input, that the video connection out is also using an analog DVI to DVI, or DVI to VGA connection. The same rule applies when using HDMI to DVI, or DisplayPort to DVI. Note you can only adapt out of DisplayPort and you will not be able to go out of the Podium with a DVI to DisplayPort connection – but DVI to HDMI will work. Also ensure the analog/digital switch is set correctly.

3. Image Quality

3.1. My image is flickering or flashing

- 3.1.1. If your Video cable is not directly connected, remove any intermediary devices in line and connect directly from the panel to your source device
- 3.1.2. If you are using cables longer than 20 feet, try a shorter cable
- 3.1.3. Confirm the cable and source work by trying them into a different display, and try a new cable
- 3.1.4. Ensure you are trying to display a supported video resolution and refresh rate by consulting against your user or administrator guide
- 3.1.5. Try giving the cable a slight 'wiggle' at both the source and the panel to determine if you have a bad connection. Should you find you have a bad connection, try a second cable before assuming the panel is the issue
- 3.1.6. If using an AM30 or other OPS, rocker off the panel, reseal the OPS, and try turning the panel on again
- 3.1.7. Will the on screen menu display correctly? If so it is more likely the issue is with the source video and should be further investigated there.

3.1.8. If you are using the Podium display with specifically a VGA to DVI connection, refer to page 55-57 of the user guide to adjust the Phase and Pitch

3.1.9. Try adjusting the refresh rate of the source video, this is found in the Display settings of the computer

3.2. I see lines or snow on my screen

3.2.1. If your Video cable is not directly connected, remove any intermediary devices in line and connect directly from the panel to your source device

3.2.2. If you are using cables longer than 20 feet, try a shorter cable

3.2.3. Confirm the cable and source work by trying them into a different display

3.2.4. Ensure you are trying to display a supported video resolution and refresh rate by consulting against your user or administrator guide

3.2.5. Try giving the cable a slight 'wiggle' at both the source and the panel to determine if you have a bad connection. Should you find you have a bad connection, try a second cable before assuming the panel is the issue

3.2.6. If using an AM30/OPS or other OPS, rocker off the panel, reseal the OPS, and try turning the panel on again

3.2.7. Will the on screen menu display correctly? If so it is more likely the issue is with the source video and should be further investigated there.

3.3. I have dead or stuck pixels

3.3.1. Please refer to the following knowledge base article for more information on your display

- G3/G4 Link - http://kb.smarttech.com/articles/TROUBLESHOOTING/Limited-pixel-warranty-for-SMART-Board-8000i-series-interactive-flat-panels?q=pixels&l=en_US&fs=Search&pn=1
- G5 Link - <http://kb.smarttech.com/servlet/fileField?id=0BEU0000000fxxs>
- 4000 an E70 -

3.4. I have bright spots on my screen

3.4.1. This can be indicative of an issue with your LCD specifically, and SMART will require pictures be provided in order to issue a replacement if still within warranty

3.4.2. Will the on screen menu display correctly? If so it is possible the issue is with the source video and should be further investigated there.

3.5. My image is not clear, there are lines, double images, or other distortions

3.5.1. If your Video cable is not directly connected, remove any intermediary devices in line and connect directly from the panel to your source device

3.5.2. If you are using cables longer than 20 feet, try a shorter cable

3.5.3. Confirm the cable and source work by trying them into a different display

3.5.4. Ensure you are trying to display a supported video resolution and refresh rate by consulting against your user or administrator guide. Note that if you are not

using the Native Resolution of the display (consult the product manual) you may not be seeing the best image possible

- 3.5.5. Try giving the cable a slight 'wiggle' at both the source and the panel to determine if you have a bad connection. Should you find you have a bad connection, try a second cable before assuming the panel is the issue
- 3.5.6. Will the on screen menu display correctly? If so it is more likely the issue is with the source video and should be further investigated there.
- 3.5.7. If you are using the Podium display with specifically a VGA to DVI connection, refer to page 55-57 of the user guide to adjust the Phase and Pitch. Otherwise in the On Screen Display menu select auto adjust to see if it can improve things

3.6. The colors on my display are not correct

- 3.6.1. Note that you will have a difference in any two displays that are side by side, some less subtle than others. This is due to differences in component tolerances and is not reserved to SMART displays. Try using the On Screen Display settings to adjust the picture first
- 3.6.2. In your On Screen Display, navigate to the Setup menu and perform a factory reset. If this is a Skype for Business system, you will need to do a Lync Room reset after this.
- 3.6.3. On the 75-G5, and 65V2-G5 panels that in Multiwindow mode, each input has its own picture settings. If you have an individual image displaying incorrect colors check the On Screen Display menu settings first
- 3.6.4. If you are using an analog input on a G3/G4 display, try using a different cable or source first

3.7. The image is cutoff or shifted to the left or right

- 3.7.1. Check that the video settings in your PC like Zoom, Crop, or Underscan have been adjusted, typically found in the Advanced Settings of Display Settings
- 3.7.2. If you have a G3/4 display, try using the 'Aspect' button on your remote to see if that corrects the size
- 3.7.3. If you have an E70 or 4000 series display, try pressing the 'Auto' button on your remote to re-synchronize the video signal.
- 3.7.4. If your Video cable is not directly connected, remove any intermediary devices in line and connect directly from the panel to your source device
- 3.7.5. If you are using cables longer than 20 feet, try a shorter cable
- 3.7.6. Confirm the cable and source work by trying them into a different display
- 3.7.7. Ensure you are trying to display a supported video resolution and refresh rate by consulting against your user or administrator guide – 1366x768 and 1920x1080 are good resolutions to test against
- 3.7.8. Power cycle your panel by turning off the rear rocker switch near the power cord, wait 30 seconds, and turn the power back on. Please note that some 4000 series displays do not have a rocker switch and you may find it easier to disconnect the cord from the wall outlet.
- 3.7.9. If you have an entirely black background, try switching to a dark grey or different color

- 3.7.10. If you are using an extended desktop mode, try switching to a cloned display, or set the IFP as the only active display.
- 3.7.11. If you are using the Podium display with specifically a VGA to DVI connection, refer to page 55-57 of the user guide to adjust the Phase and Pitch, and Horizontal and Vertical positions

3.8. The image does not fill the entire screen

- 3.8.1. If using a G5-75 IFP, and 65V2-G5 check that the Multi Window setting is not turned on
- 3.8.2. Check that the video settings in your PC have not been adjusted, typically found in the Advanced Settings. It has been seen on AMD cards where 'Overscan' is set to on. This is found in the advanced display settings on your PC, found by right clicking the desktop
- 3.8.3. If your Video cable is not directly connected, remove any intermediary devices in line and connect directly from the panel to your source device
- 3.8.4. If you are using cables longer than 20 feet, try a shorter cable
- 3.8.5. Confirm the cable and source work by trying them into a different display
- 3.8.6. Ensure you are trying to display a supported video resolution and refresh rate by consulting against your user or administrator guide
- 3.8.7. Power cycle your panel by turning off the rear rocker switch near the power cord, wait 30 seconds, and turn the power back on. Please note that some 4000 series displays do not have a rocker switch and you may find it easier to disconnect the cord from the wall outlet.
- 3.8.8. Try performing a factory reset. This is found in the On Screen Display menu. If this is a Skype for Business system, you will need to do a Lync Room reset after this.
- 3.8.9. If you are using the Podium display with specifically a VGA to DVI connection, refer to page 55-57 of the user guide to adjust the Phase and Pitch, and also check the image scaling is set for 1:1 in the On Screen Display menu

3.9. A persistent or burnt in image appears on my display

- 3.9.1. Please refer to this article here: [Image Persistence](#)

4. Audio and Acoustics

4.1. No sound from panel speakers

- 4.1.1. Check that mute and volume settings are set as expected
- 4.1.2. On the 8070-G4 panels, there is an external/internal speaker switch on the rear of the panel; otherwise the settings are On Screen Display based.
- 4.1.3. Make sure all sources are mapped through the PC and into the SMARTBoard correctly. By right clicking the speaker icon in the Windows system tray and selecting 'Playback Devices' you have access to the input audio path setup. First

ensure the SMART board is set as the Default Device, this is done by right clicking its icon and selecting the option

- 4.1.4. Note that HDMI, analog, and USB connections are typically available and may require additional setup. Also note the OSD settings on your IFP will give additional mapping options on G4 and earlier displays – check that the video source is associated to the USB source you want. G5 will give the option to switch between HDMI or USB only.

Please refer to the user guide for your specific panel for USB mapping information.

Note that there is no USB audio support in the 75-G5, and 65V2-G5 panels

- 4.1.5. Further to ensuring proper mapping, volume settings must also be confirmed. There is a volume setting on the PC, the IFP, and in some cases the application itself. Set any PC or Application volume to approximately 80% with the IFP being the final control. This will also help with overall acoustical performance.
- 4.1.6. Check all connections. RCA cables in particular can look fully engaged and still not be
- 4.1.7. On the 8070-G4 panels, there is an external/internal speaker switch on the rear of the panel for enabling/disabling the speakers; otherwise look in the On Screen Display to enable or disable the speakers

4.2. No sound from external speakers plugged into the panel

- 4.2.1. Try a second set of speakers or a different source audio to ensure the speakers are functioning as expected before testing the panel.
- 4.2.2. Check that mute and volume settings are set as expected
- 4.2.3. Make sure all sources are mapped through the PC and into the SMARTBoard correctly. By right clicking the speaker icon and selecting 'Playback Devices' you have access to the input audio path setup. First ensure the SMART board is set as the Default Device, this is done by right clicking it's icon and selecting the option
- 4.2.4. Note that HDMI, analog, and USB connections are typically available and may require additional setup. Also note the OSD settings on your IFP will give additional mapping options on G4 and earlier display – check that the video source is associated to the USB source you want. G5 will give the option to switch between HDMI or USB only.
- 4.2.5. Further to ensuring proper mapping, volume settings must also be confirmed. There is a volume setting on the PC, the IFP, and in some cases the application itself. Set any PC or Application volume to approximately 80% with the IFP being the final control. This will also help with overall acoustical performance.
- 4.2.6. Check all connections. RCA cables in particular can look fully engaged and still not be
- 4.2.7. Ensure the speakers are correctly powered
- 4.2.8. On the 8070-G4 panels, there is an external/internal speaker switch on the rear of the panel for enabling/disabling the speakers; otherwise look in the On Screen Display to enable or disable the speakers

- 4.2.9. With the G5 panels if a cable is plugged into the line out of the panel it will turn off the internal speakers
- 4.2.10. Note that there is no USB audio support in the 75-G5, and 65V2-G5 series
- 4.2.11. The E70 and 4000 series feature an optical audio output requiring a receiver. Generally, but not always, any optical cable attached to those displays should have red light emanating from its opposite unconnected tip. If this is not the case the cable could be damaged and should be replaced. Otherwise verify the cable and receiver with a different optical source like a BluRay player.

4.3. Sounds are distorted or muffled

- 4.3.1. The most likely cause of distorted audio can be incorrectly set levels. If your computer audio is too low and your IFP is too high the audio will sound tinny and noisy. Conversely if your PC is turned up too high and your IFP too low then it can sound garbled and muffled. It should be set with your sources at approximately 80% of max volume and your IFP as the control stage. Applies to analog and digital.
- 4.3.2. Check that all connections are fully engaged.

4.4. There is buzzing or hum

- 4.4.1. Having your IFP plugged into a completely different outlet than your source device can cause a 'ground loop'. It is recommended to always plug your devices into the same power bar or use a balun or other isolation transformer to decouple your audio path from earth ground. Please note SMART does not condone the use of 'ground loop isolators' or 'ground lifters' for normal use as they can defeat built in safety measures. The use of such device can cause injury, and if using an isolation technique, decoupling via transformer is the safest way. Applies to analog and digital.
- 4.4.2. Long or poor quality analog cables can pick up external noise. Efforts should be made to use the shortest runs possible with only high quality shielded cables, and try to keep runs away from AC power mains. Does not typically apply to digital audio.
- 4.4.3. For SRS systems, please see this article:
http://kb.smarttech.com/articles/HOW_TO/Reducing-white-noise-created-by-your-SMART-Room-System-for-Microsoft-Lync?q=srs+audio+buzz&l=en_US&fs=Search&pn=1

4.5. The overall volume is low

- 4.5.1. Make sure all sources are mapped through the PC and into the SMARTBoard correctly. By right clicking the speaker icon in the system tray and selecting 'Playback Devices' you have access to the input audio path setup. Note that HDMI, analog, and USB connections are typically available and may require additional setup. Also note the OSD settings on your IFP will give additional mapping options on G4 and earlier display. G5 will give the option to switch between HDMI or USB only.

- 4.5.2. Further to ensuring proper mapping, volume settings must also be confirmed. There is a volume setting on the PC, the IFP, and in some cases the application itself. Set any PC or Application volume to approximately 80% with the IFP being the final control. This will also help with overall acoustical performance.
- 4.5.3. If using external speakers, ensure they are correctly powered with an appropriate, and where applicable amplified signal.

4.6. I have issues with Echo

- 4.6.1. Audio echo in a voice conference system is typically related to the echo cancellation software and its inability to correctly process all the signals properly. It can be resultant in either the system not being able to pass the audio signal fast enough, or the room itself and the spacing of the equipment being too large and far apart. Try relocating the equipment if possible, or re position the individuals to be closer to a microphone. You may need to add additional microphones if possible.
- 4.6.2. In the case of the 8084 and 8070 G4 displays it is recommended to use analog audio paths over digital, as the digital paths are considerably electrically longer due to internal processing.
- 4.6.3. For G5 panels in a Video Conferencing solution it is recommended to use an external speaker system due to the side firing nature of the speakers causing additional acoustical delays.

4.7. My fans are always running or I'm getting a fan error

- 4.7.1. If you have an 8084 and you are using an XTM module you can contact SMART Technical Support to order part 1026351 to disable the fans. This is only intended for use with a SMART XTM module and will void your warranty if used with a regular OPS PC.
- 4.7.2. Any other fan issue will be treated under normal warranty terms and conditions

4.8. My Panel is making a small whine or buzz from the back

- 4.8.1. In most cases this is normal. All flat panel displays will emit an electrical noise of some sort and there is no risk or danger with SMART Displays. In some isolated cases component tolerancing can cause this to be more noticeable in some instances than others.

5. Touch and Inking

Note - Please refer to Appendix 'A' for examples of the different camera views for the G3/G4/G5 series of displays. The E70 and 4000 do not display these views, as the touch system is different. Please refer to section 5.0 for E70 and 4000 series information.

5.1. I am getting a 'Limited Functionality' message in the corner of my screen

- 5.1.1. If the bezel or glass is dusty, dirty, or has some sort of foreign material on it the touch may be interrupted, and cleaning this is always a good first step. Refer to your user guide for specific cleaning steps for your IFP and do not use chemical cleaners! It's a good idea to remove power from the board completely prior to cleaning.
- 5.1.2. Because these are Infrared (IR) based cameras, they can be subject to interference from other IR sources. Follow this rule of thumb – if it never calibrates it is potentially an interfering IR source. Remove any potential IR sources from the room, or move the panel to a different space to verify. Most likely sources are windows, incandescent or arc lights, IR audio devices, desk lamps and other light sources.
- 5.1.3. It is possible that you have a failed camera, or a camera that has had its internal firmware corrupted (G4 only) – this will show up in the log files
- 5.1.4. If using a G4 IFP, go into the diagnostics menu from the SMART Settings>About Software>Tools path. From there under Views>Board Toolbar, you have the option to perform a 'Reset' and then a 'Enumeration and Calibration'. Perform both types

5.2. There is no ink/touch

- 5.2.1. Restart your PC and your SMARTBoard before doing anything else. While not likely, the PC may have USB issues preventing the IFP from properly communicating
- 5.2.2. If you have any extenders or other inline devices remove them first to confirm they are not contributing to the issue
- 5.2.3. Check that all cable connections are fully engaged and not loose – just because you see video it does not mean you have a good touch connection. Every Interactive display has a touch light indicator that will show if the touch connection is working. G4 IFP's have a red/green touch indicator below the power button. G5's have a moon icon that will change from and amber to white state to indicate connectivity. The Podium has a power button and touch indicator like the G3/G4 IFP. Refer to your user manual for specifics.
- 5.2.4. If you have a computer connected and are running in an extended display mode (one large 'desktop'), or have multiple SMARTBoards, try an Orient. Ensure that the orientation screen is on the board you wish to setup by pressing the spacebar on your keyboard. Orient is found in the SMART Settings
- 5.2.5. If you have a G3/G4 IFP, make sure that you have correctly mapped the USB connection to the Video source you are using. These settings can be found in the On Screen Display under 'Setup'
- 5.2.6. Confirm that the computer's plug-and-play system has detected the USB device and installed drivers for it. For Windows, ensure no red 'X' or yellow '!' in Device Manager. For Mac's, you need to open System Information on your computer and

check if your USB device is listed correctly or has an error (for example, "Device has not been configured")

- 5.2.7. Please note that the G3/G4 Interactive Displays will not have a functioning touch system unless video is applied.
- 5.2.8. Check for any error messages and if you see a 'limited functionality' please refer to section 4.1.
- 5.2.9. If using a Podium check the pen for any damage, and if possible substitute a known working pen

5.3. There is ink/touch but it is intermittent

- 5.3.1. Restart your PC before doing anything else. While not likely, the PC may have USB issues preventing the IFP from properly communicating
- 5.3.2. If the bezel or glass is dusty, dirty, or has some sort of foreign material on it the touch may be interrupted, and cleaning this is always a good first step. Refer to your user guide for specific cleaning steps for your IFP and do not use chemical cleaners! It's a good idea to remove power from the board completely prior to cleaning.
- 5.3.3. Try to calibrate and orient. The panel should only ever require calibration upon initial install, unless the room/lighting changes. However, if either has been corrupted you may see this message. This can be found in the SMART Hardware Settings. You may find that using a closed fist as opposed to pen finger will work, and then you can go back and try a pen or finger if successful. A closed fist can provide a bigger target to calibrate against, and then it can be refined with a pen/finger.
- 5.3.4. Because these are Infrared (IR) based cameras, they can be subject to interference from other IR sources. Follow this rule of thumb – if it never calibrates it is potentially an interfering IR source. Remove any potential IR sources from the room, or move the panel to a different space to verify. Most likely sources are windows, incandescent or arc lights, IR audio devices, desk lamps and other light sources.
- 5.3.5. It is possible that you have a failed camera, or a camera that has had its internal firmware corrupted (G4 only) – this will be shown in the log files
- 5.3.6. If the intermittent touch starts in the middle of the board or in one or multiple corners and gets worse over time, you have a potential mounting issue in terms of flatness of the mounting surface. Essentially it will in turn affect the glass flatness, causing it to bow and incorrectly deflect the view of the touch sensors causing the touch to stop working. The board should be removed from the wall and calibrated. If the problem goes away off the wall, inspect the wall/mount for issues.
- 5.3.7. If using a G4 IFP, go into the diagnostics menu from the SMART Settings>About Software>Tools path. From there under Views>Board Toolbar, you have the option to perform a 'Reset' and then a 'Enumeration and Calibration'. Perform both types

- 5.3.8. If using a Podium check the pen for any damage, and if possible substitute a known working pen

5.4. Finger works but pen doesn't

- 5.4.1. This can indicate you are not running SMART Drivers, which can be found on the SMART Support page under Product Drivers – support.smarttech.com
- 5.4.2. Try to calibrate and orient. The panel should only ever require calibration upon initial install, unless the room/lighting changes. However, if either has been corrupted you may see this message. This can be found in the SMART Hardware Settings. You may find that using a closed fist as opposed to pen finger will work, and then you can go back and try a pen or finger if successful. A closed fist can provide a bigger target to calibrate against, and then it can be refined with a pen/finger.
- 5.4.3. It is possible that you have a failed camera, or a camera that has had its internal firmware corrupted, this will be shown in the log files typically
- 5.4.4. If the inking works in part of the board, but not in the middle of the board or in one or multiple corners and gets worse over time, you have a potential mounting issue in terms of flatness of the mounting surface. The board should be removed from the wall and calibrated. If the problem goes away off the wall, inspect the wall/mount for issues.

5.5. Touch does not work in one corner or other parts of the screen

- 5.5.1. If this is associated with a 'Limited Functionality' message, please look at step 4.1 of this troubleshooting section
- 5.5.2. Try to calibrate and orient. The panel should only ever require calibration upon initial install, unless the room/lighting changes, or if you do an upgrade. This can be found in the hardware section of SMART Settings
- 5.5.3. It is possible that you have a failed camera, or a camera that has had its internal firmware corrupted, and if the initial steps do not resolve contact SMART Support to further troubleshoot the issues
- 5.5.4. If the inking works in part of the board, but not in the middle of the board or in one or multiple corners and gets worse over time, you have a potential mounting issue in terms of flatness of the mounting surface. The board should be removed from the wall and calibrated. If the problem goes away off the wall, inspect the wall/mount for issues.
- 5.5.5. For the Podium, refer to [this document](#) when there is no input working in a rectangular area

5.6. The ink drops as I write

- 5.6.1. Ensure that when you are holding the pen you are not blocking the black plastic cone. The cameras on the corners need to see this cone to function properly.
- 5.6.2. Also ensure that you are keeping the pen within a 45-degree perpendicular angle to the IFP. Too steep of an angle can cause the cameras to have issue seeing the pen properly

- 5.6.3. If this is associated with a 'Limited Functionality' message, please look at step 4.1 of this troubleshooting section
- 5.6.4. Try to calibrate and orient. The panel should only ever require calibration upon initial install, unless the room/lighting changes, or if you upgrade the touch firmware. However, if either has been corrupted you may see this message. This can be found in the SMART Hardware Settings. You may find that using a closed fist as opposed to pen finger will work, and then you can go back and try a pen or finger if successful. A closed fist can provide a bigger target to calibrate against, and then it can be refined with a pen/finger.
- 5.6.5. It is possible that you have a failed camera, or a camera that has had its internal firmware corrupted, typically this is shown in the log files
- 5.6.6. If the inking works in part of the board, but not in the middle of the board or in one or multiple corners and gets worse over time, you have a potential mounting issue in terms of flatness of the mounting surface. The board should be removed from the wall and calibrated. If the problem goes away off the wall, inspect the wall/mount for issues.
- 5.6.7. Do not press unreasonably hard when writing, too much pressure can cause glass deflection and confuse the cameras
- 5.6.8. If using a Podium check the pen for any damage, and if possible substitute a known working pen

5.7. When inking the colors are not showing correctly

- 5.7.1. Ensure that you have the latest Touch Firmware for your SMARTBoard. Visit support.smarttech.com and visit the Downloads and Drivers page to see if you have any updates available.
- 5.7.2. Try a longer delay during the time from removing the pen from the pen holder, and touching the surface of the board with the pen tip
- 5.7.3. Also ensure that you are keeping the pen within a 45-degree perpendicular angle to the IFP. Too steep of an angle can cause the cameras to have issue seeing the pen properly
- 5.7.4. If the bezel or glass is dusty, dirty, or has some sort of foreign material on it the touch may be interrupted, and cleaning this is always a good first step. Refer to your user guide for specific cleaning steps for your IFP and do not use chemical cleaners! It's a good idea to remove power from the board completely prior to cleaning.
- 5.7.5. Try to calibrate and orient. The panel should only ever require calibration upon initial install, unless the room/lighting changes. However, if either has been corrupted you may see this message. This can be found in the SMART Hardware Settings. You may find that using a closed fist as opposed to pen finger will work, and then you can go back and try a pen or finger if successful. A closed fist can provide a bigger target to calibrate against, and then it can be refined with a pen/finger.
- 5.7.6. Because these are Infrared (IR) based cameras, they can be subject to interference from other IR sources. Follow this rule of thumb – if it never calibrates it is very likely an interfering IR source. Remove any potential IR sources from the

room, or move the panel to a different space to verify. Most likely sources are windows, incandescent or arc lights, IR audio devices, desk lamps and other light sources.

- 5.7.7. It is possible that you have a failed camera, or a camera that has had its internal firmware corrupted, this can be seen in the log files
- 5.7.8. It is possible that you may have a faulty pen. If possible please try swapping pens from a known good board, otherwise visit smarttech.com to order a replacement set.

5.8. The ink or touch is not accurate to the pen or finger

- 5.8.1. If the bezel or glass is dusty, dirty, or has some sort of foreign material on it the touch may be interrupted, and cleaning this is always a good first step. Refer to your user guide for specific cleaning steps for your IFP and do not use chemical cleaners! It's a good idea to remove power from the board completely prior to cleaning.
- 5.8.2. Try to calibrate and orient with the pen as opposed to your finger. The panel should only ever require calibration upon initial install, unless the room/lighting changes. However, if either has been corrupted you may see this message. This can be found in the SMART Hardware Settings. You may find that using a closed fist as opposed to pen finger will work, and then you can go back and try a pen or finger if successful. A closed fist can provide a bigger target to calibrate against, and then it can be refined with a pen/finger.
- 5.8.3. If using a G4 IFP, go into the diagnostics menu from the SMART Settings>About Software>Tools path. From there under Views>Board Toolbar, you have the option to perform a 'Reset' and then a 'Enumeration and Calibration'. Perform both types
- 5.8.4. On a podium, if not accurate to the pen try Orienting the pen by pressing the Orient button on the top right. SMART Drivers must be already installed for this to work. Otherwise try swapping the pen with a known working one

5.9. Ink is lagging behind the pen or finger

- 5.9.1. If you are at a UHD resolution (3840x2160) you will require a desktop or laptop computer with at minimum a GTX1060 graphics card or AMD RX 480 to support this higher resolution. If you do not have a dedicated graphics card you will experience lag and video issues at this higher resolution. Built in CPU graphics chipsets are not sufficient, and can only do static images at 4K.
- 5.9.2. If you are not directly connected with the USB or video, remove any intermediary devices in line and connect directly from the panel to your source device
- 5.9.3. Try restarting your computer
- 5.9.4. Close any applications that are not required. You may have something that is slowing down your system.
- 5.9.5. Ensure your Hard Drive is not full, and you have sufficient RAM to handle all the tasks you are trying to run

5.10. My letters are connecting together when I write

- 5.10.1. This is typically related to the speed at which you write and how far you pull the pen off the surface of the IFP when writing between letters. It is recommended that you try to adjust your handwriting to compensate for this

5.11. Touch not working properly in Multi Window (6075, 6065-V2, 8075, and 8065-V2 Only)

- 5.11.1. Touch will not work in Multi-Window. It is not a feature of this panel.

5.12. When touching the one display in a dual display configuration it controls the wrong Display

- 5.12.1. If you have a computer connected and are running in an extended display mode (one large 'desktop'), or have multiple SMARTBoards, try an Orient. Ensure that the orientation screen is on the board you wish to setup by pressing the spacebar on your keyboard. Orient is found in the SMART Settings

5.13. Touch works but stops reacting when I try to calibrate

- 5.13.1. If you have a computer connected and are running in an extended display mode (one large 'desktop'), or have multiple SMARTBoards, try an Orient. Ensure that the orientation screen is on the board you wish to setup by pressing the **spacebar** on your keyboard. Orient is found in the SMART Settings

5.14. Can't write in Microsoft Office Programs

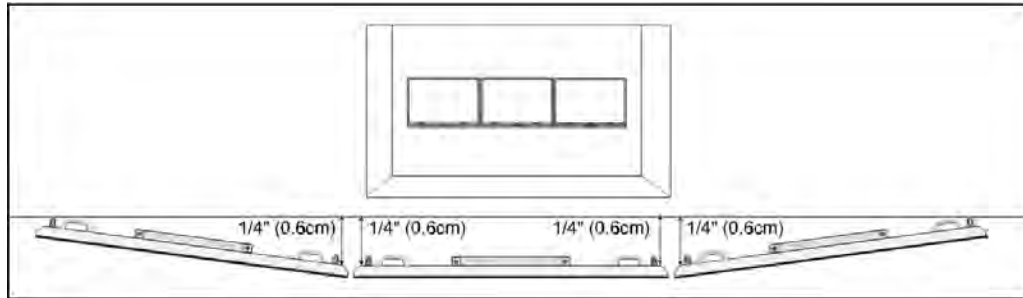
- 5.14.1. You will need Office 2013 or higher. If your version of office does not support pen tools you will be limited to inking over the Office program window with SMART Ink only. To do so you will need to be running SMART Drivers and SMART Ink. Go to the downloads page on smarttech.com if you do not have this software
- 5.14.2. If you do not get any inking at all ensure you are running the SMART drivers and Ink, and refer to the first two sections, 4.1 and 4.2 off this guide.

5.15. Toolbar is not opening when I pick up the pen

- 5.15.1. The pen must be resting in the pen well to be recognized
- 5.15.2. If you are not running SMART drivers and Ink you will not see the toolbar
- 5.15.3. If you are blocking the black plastic Pen cone on the tip of the pen you may not get the toolbar

5.16. Toolbar opens when I don't hold a pen

- 5.16.1. Because these are IR based cameras, they can be subject to interference from other IR sources. This includes the pens being sensed incorrectly. Remove any potential IR sources from the room, or move the panel to a different space to verify
- 5.16.2. If you have two or more panels on the same wall or close to each other on a perpendicular wall it is possible that they are interfering with each other. The panels should be angled and offset in such a fashion as to not remain in each other's line of sight



5.16.3. If you have a highly polished floor, glass walls, or other potential reflective surfaces close to the IFP, it may cause unwanted triggering of the toolbar

5.17. I'm getting unexpected or unwanted ink

- 5.17.1. Make sure your sleeve cuff or other clothing is not contacting the board as you write
- 5.17.2. Watch for dragging your pinky finger as you write
- 5.17.3. Make sure there are no strong light sources directly over the display
- 5.17.4. Look for any external Infrared sources that could be contacting the board, including but not limited to plasma displays, IR audio systems, direct sunlight, laser pointers/IR remote controls, etc...

5.18. The Podium pen seems to sensitive

- 5.18.1. Please review [this document](#) in regards to the hover feature

6. E70 and 4000 Touch and Inking

Note – there is a 3m USB cable restriction with the E70 and the 4055/4065 displays. If you are using a USB cable longer than 3m that does not have a proper repeater you may experience touch issues. Only the 4075 and 4084 models can use the longer 5m cable.

6.1. No touch or intermittent touch

- 6.1.1. Restart your PC and your SMARTBoard before doing anything else. While not likely, the PC may have USB issues preventing the IFP from properly communicating
- 6.1.2. Update your software. For Windows this requires Notebook at Version 11.3 or higher, and in addition Mac users will need to make sure their UPDD drivers are also up to date.
- 6.1.3. If you have any extenders or other inline devices remove them first to confirm they are not contributing to the issue
- 6.1.4. Check that all cable connections are fully engaged and not loose – just because you see video it does not mean you have a good touch connection.
- 6.1.5. See this article on how to calibrate your display:

<http://knowledgebase.force.com/articles/TROUBLESHOOTING/Configuring-and-calibrating-your-SMART-Board-E70-and-4000-series-interactive-flat-panel>

- 6.1.6. Confirm that the computer's plug-and-play system has detected the USB device and installed drivers for it. For Windows, ensure no red 'X' or yellow '!' in Device Manager. For Mac's, you need to open System Information on your computer and check if your USB device is listed correctly or has an error (for example, "Device has not been configured")
- 6.1.7. Try a different source PC noting the above steps as well

6.2. Ink is lagging behind the pen or finger

- 6.2.1. If you are at a UHD resolution (3840x2160) you will require a desktop or laptop computer with at minimum a GTX1060 graphics card or AMD RX 480 to support this higher resolution. If you do not have a dedicated graphics card you will experience lag and video issues at this higher resolution. Built in CPU graphics chipsets are not sufficient, and can only do static images at 4K.
- 6.2.2. If you are not directly connected with the USB or video, remove any intermediary devices in line and connect directly from the panel to your source device
- 6.2.3. Try restarting your computer

- 6.2.4. Close any applications that are not required. You may have something that is slowing down your system.

6.3. The ink or touch is not accurate to the pen or finger

- 6.3.1. If the bezel or glass is dusty, dirty, or has some sort of foreign material on it the touch may be interrupted, and cleaning this is always a good first step. Refer to your user guide for specific cleaning steps for your IFP and do not use chemical cleaners! It's a good idea to remove power from the board completely prior to cleaning.
- 6.3.2. See this article on how to calibrate your display:

<http://knowledgebase.force.com/articles/TROUBLESHOOTING/Configuring-and-calibrating-your-SMART-Board-E70-and-4000-series-interactive-flat-panel>

6.4. The ink drops as I write

- 6.4.1. Ensure there are no obstructions along the bezels of the interactive flat panel.
- 6.4.2. Remove or turn off any sources of IR light in the room near the panel. This can include but is not limited to direct sunlight, overhead lighting, other SMART Board® or kapp products, and any other IR devices in the room
- 6.4.3. Prevent any overhead light sources by turning them off, closing the blinds where applicable, or blocking it.
- 6.4.4. See this article on how to calibrate your display:

<http://knowledgebase.force.com/articles/TROUBLESHOOTING/Configuring-and-calibrating-your-SMART-Board-E70-and-4000-series-interactive-flat-panel>

- 6.4.5. Try another computer, ideally one that is working from another setup.
- 6.4.6. Do not press unreasonably hard when writing, too much pressure can cause glass deflection and confuse the cameras
- 6.4.7. If the inking works in part of the board, but not in the middle of the board or in one or multiple corners and gets worse over time, you have a potential mounting issue in terms of flatness of the mounting surface. The board should be removed from the wall and calibrated. If the problem goes away off the wall, inspect the wall/mount for issues.

6.5. I'm getting unexpected or unwanted ink

- 6.5.1. Make sure your sleeve cuff or other clothing is not contacting the board as you write
- 6.5.2. Watch for dragging your pinky finger as you write
- 6.5.3. Make sure there are no strong light sources directly over the display
- 6.5.4. Look for any external Infrared sources that could be contacting the board, including but not limited to plasma displays, IR audio systems, direct sunlight, laser pointers/IR remote controls, etc...

7. Room Control and RS232

7.1. No RS232 communication

7.1.1. Verify that the connection between the computer and the room control system is using the following settings (more details for specific SMART products are available on the SMART support site):

- Data rate: 19.2 kbps
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

7.1.2. Null modem cables cannot be used. A null cable is 'usually' identified by having the same connectors on both ends

7.1.3. Check that cables are connected and not loose

7.1.4. Test the communication by making the serial connection directly between the interactive flat panel and a computer running a terminal program, such as Putty or TeraTerm. If the panel responds correctly to commands from the terminal program, you can isolate the issue to the room control system.

7.1.5. Try disconnecting all equipment other than that connected to the RS232 connection. If it works, reconnect pieces one at a time until you determine the conflict

7.2. Communication established but commands not working

7.2.1. Verify that the connection between the computer and the room control system is using the following settings (more details for specific SMART products are available on the SMART support site):

- Data rate: 19.2 kbps
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

7.2.2. Note that some commands will only work when the product is on, consult your user/admin guide for more information

7.2.3. Power cycle the system by turning the rear rocker switch off, waiting 30 seconds, and turning the panel back on. Please note that some 4000 series displays do not have a rocker switch and you may find it easier to disconnect the cord from the wall outlet.

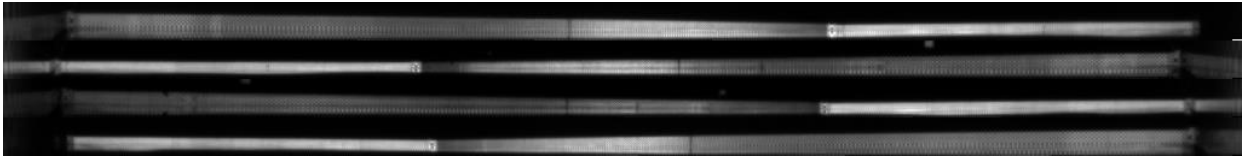
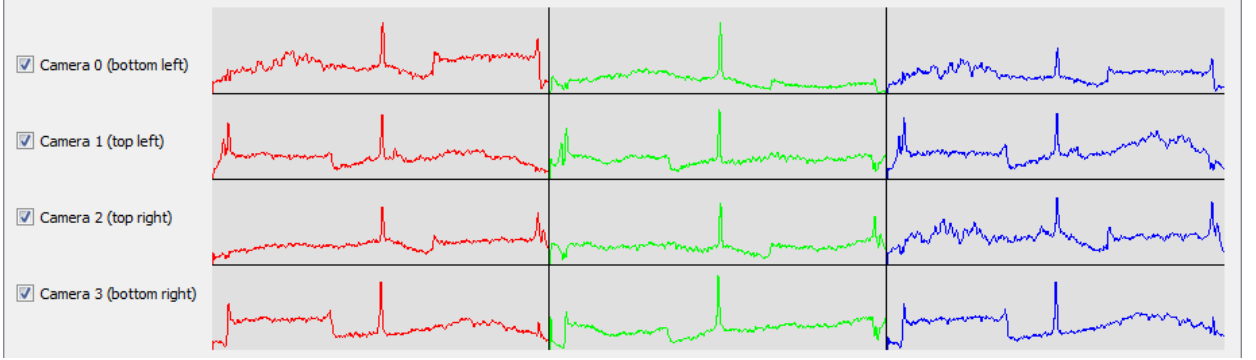
- 7.2.4. Null modem cables cannot be used. A null cable is 'usually' identified by having the same connectors on both ends
- 7.2.5. Check that cables are connected and not loose
- 7.2.6. Troubleshoot the initial communication by testing the IFP with a short cable directly connected to a PC running a Terminal program like Putty or TeraTerm. If you can confirm that the display will react correctly from a terminal program then it is working as intended and the issues reside in the host system

7.3. Commands are working intermittently or are ignored

- 7.3.1. Settings are the first things to check for. All SMART products are 19.2kbps at 8 bit, no parity, 1 stop bit. Updates can be found on the SMART Support site for your specific product
- 7.3.2. Note that some commands will only work when the panel is on, consult your user/admin guide for more information
- 7.3.3. Ensure that you are not continuously polling for data. Requesting Power Status every half second will cause issues for example
- 7.3.4. Power cycle the system by turning the rear rocker switch off, waiting 30 seconds, and turning the panel back on. Please note that some 4000 series displays do not have a rocker switch and you may find it easier to disconnect the cord from the wall outlet.
- 7.3.5. Null modem cables cannot be used. A null cable is 'usually' identified by having the same connectors on both ends
- 7.3.6. Check that cables are connected and not loose
- 7.3.7. Test the communication by making the serial connection directly between the interactive flat panel and a computer running a terminal program, such as Putty or TeraTerm. If the panel responds correctly to commands from the terminal program, you can isolate the issue to the room control system.
- 7.3.8. If you have a G5 panel with a Scaler Version lower than 1.5.0.6, please visit smarttech.com/support for the update. The scaler version is found in the 'About' tab in the On Screen Display menu

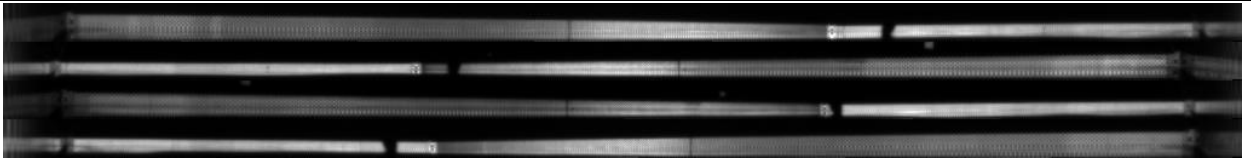
8. Appendix A

The following examples show normal and irregular camera views for the different variations of Interactive Displays. There are no camera view available for the 4000 series.

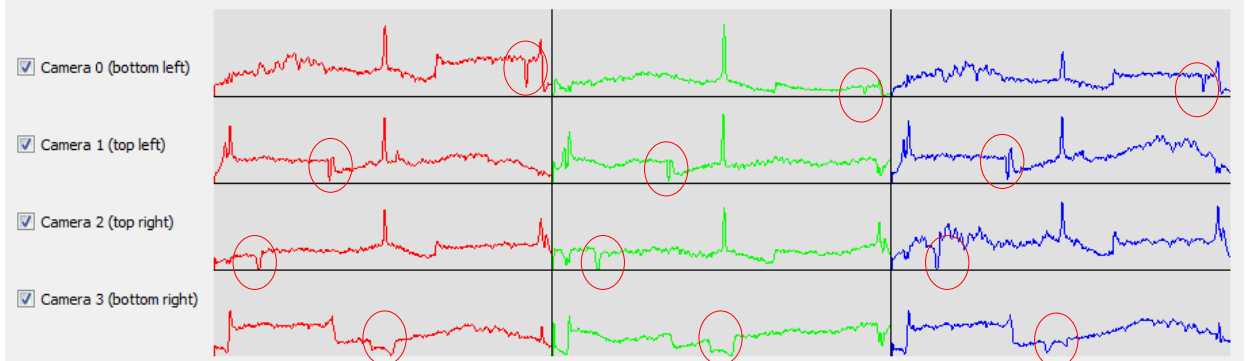
Symptom: No issue, system working normally with no one touching the display.	
G4	
G5	<div> <input checked="" type="checkbox"/> Camera 0 (bottom left) </div> <div> <input checked="" type="checkbox"/> Camera 1 (top left) </div> <div> <input checked="" type="checkbox"/> Camera 2 (top right) </div> <div> <input checked="" type="checkbox"/> Camera 3 (bottom right) </div> 

Symptom: No issue, system working normally with one touch on the display. The dark spots on the G4 are a finger, the touch is circled on the G5.

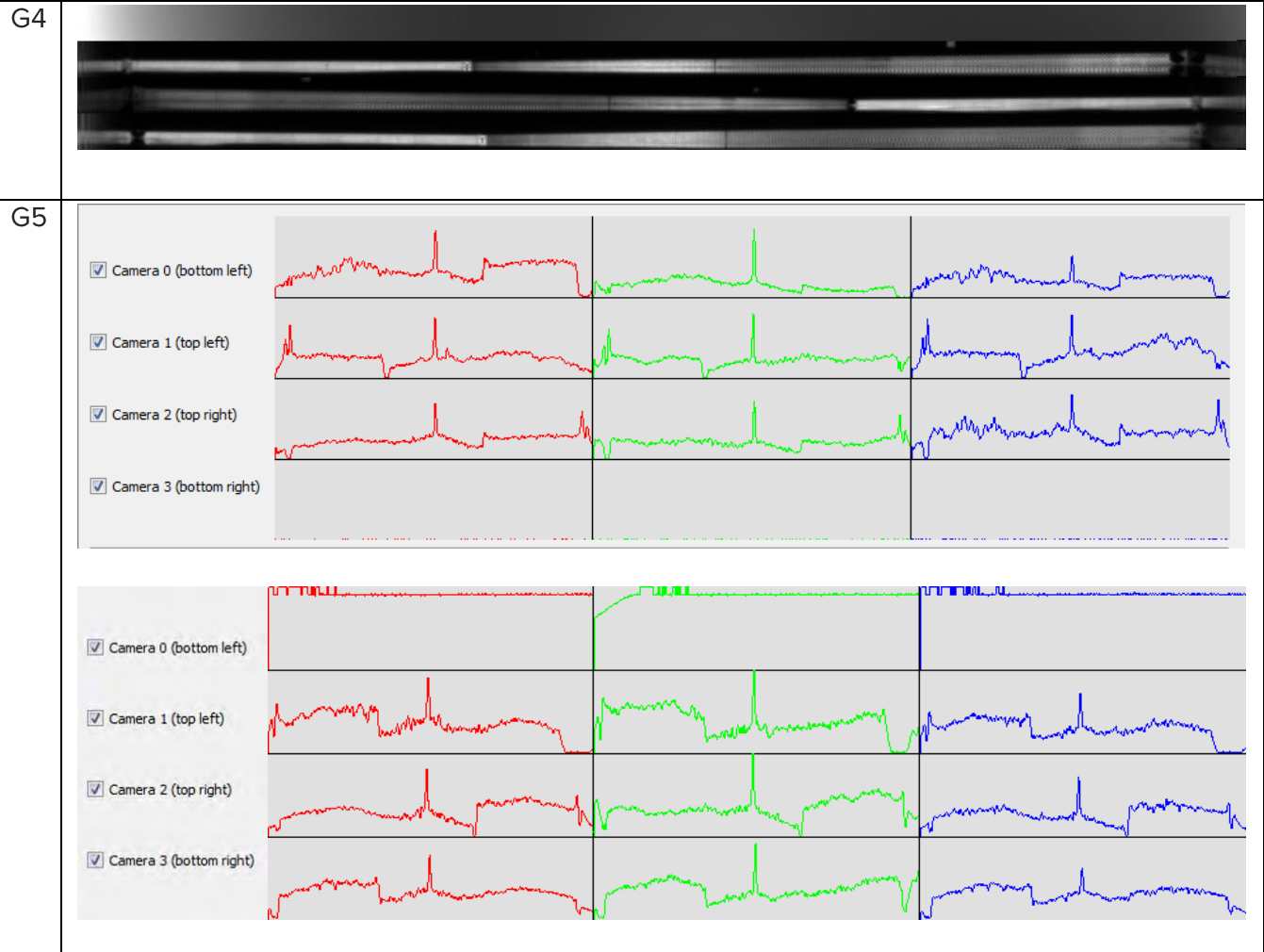
G4



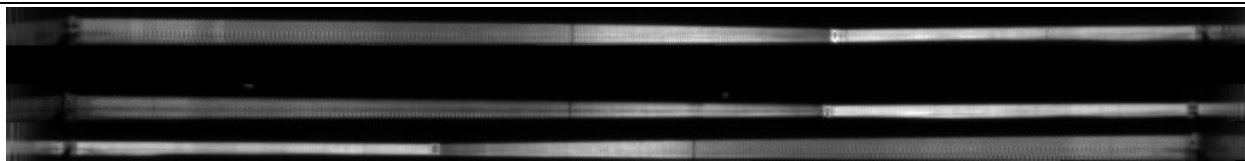
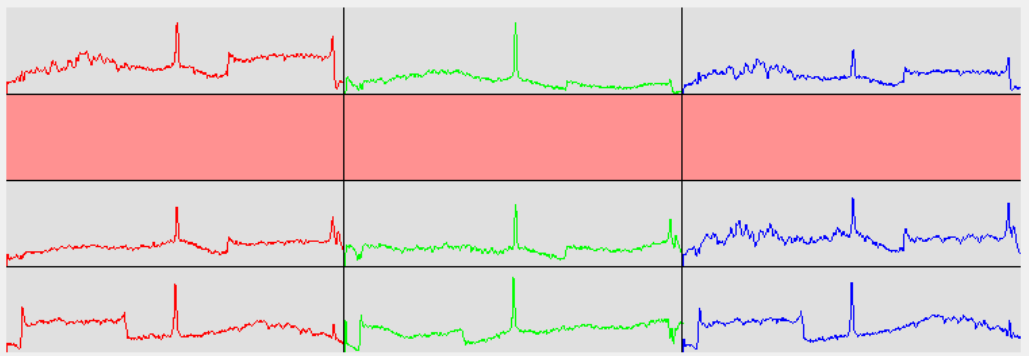
G5



Symptom: Blocked Camera. There is something sitting in the pen tray in the corner on top of the camera. Note that on the G5 display the signal will either be at the bottom or the top of the signal bar, depending on how close the object is to the corner. Remove the object and calibrate if necessary.



Symptom: Camera Failure. The camera has stopped working and needs to be replaced. In G4 displays this is possible to do onsite. Due to the nature of the camera mounting on the G5 displays it can only be done in a repair center.

G4	
G5	<div data-bbox="284 611 462 863"> <input checked="" type="checkbox"/> Camera 0 (bottom left) <input checked="" type="checkbox"/> Camera 1 (top left) <input checked="" type="checkbox"/> Camera 2 (top right) <input checked="" type="checkbox"/> Camera 3 (bottom right) </div> 

Symptom: Touch Master Error. The controller for the touch system is not communicating with any of the cameras. This will require repair at a SMART authorized repair facility.

G4



G5

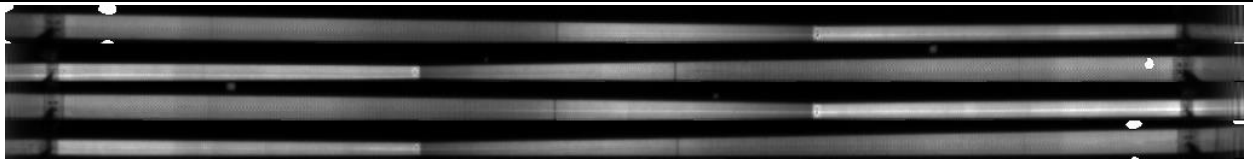
<input checked="" type="checkbox"/> Camera 0 (bottom left)			
<input checked="" type="checkbox"/> Camera 1 (top left)			
<input checked="" type="checkbox"/> Camera 2 (top right)			
<input checked="" type="checkbox"/> Camera 3 (bottom right)			

Symptom: Direct light. This causes issues with the cameras not being able to see the target correctly. You may still have limited functionality, but it's best to remove or block the source. A calibration may be required. In rare cases of prolonged exposure, the camera LED's may be overdriven and require replacement. This may be possible in the field for G4 displays only.

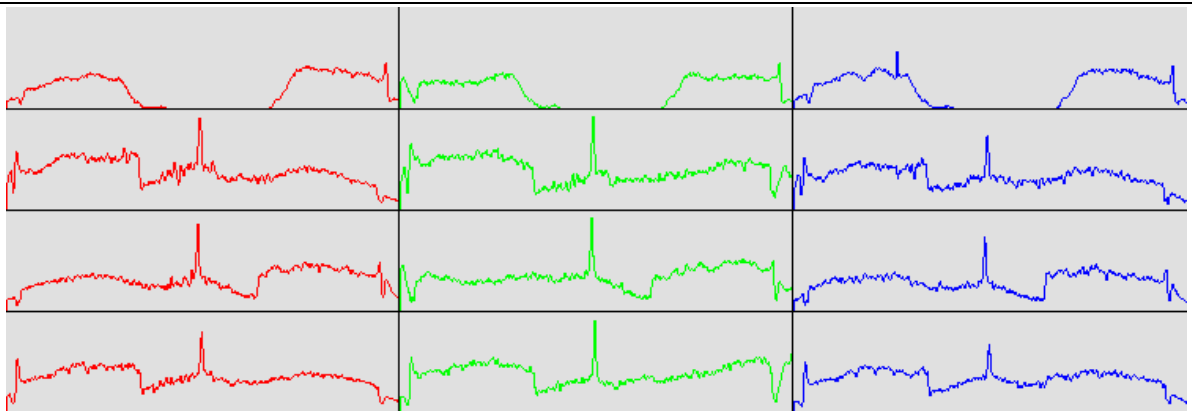
On G4 display you will see a hotspot as seen below. On G5 displays, depending on where the light hits can change the view. The top view shows light attenuating the camera signal from hitting the corner. The middle picture shows light hitting the side bezels causing multiple interferences.

The bottom picture shows interference from a strong light, directly overhead the display. In this case it was an 8 ft. long fluorescent tube, 2 ft. directly overtop the IFP.

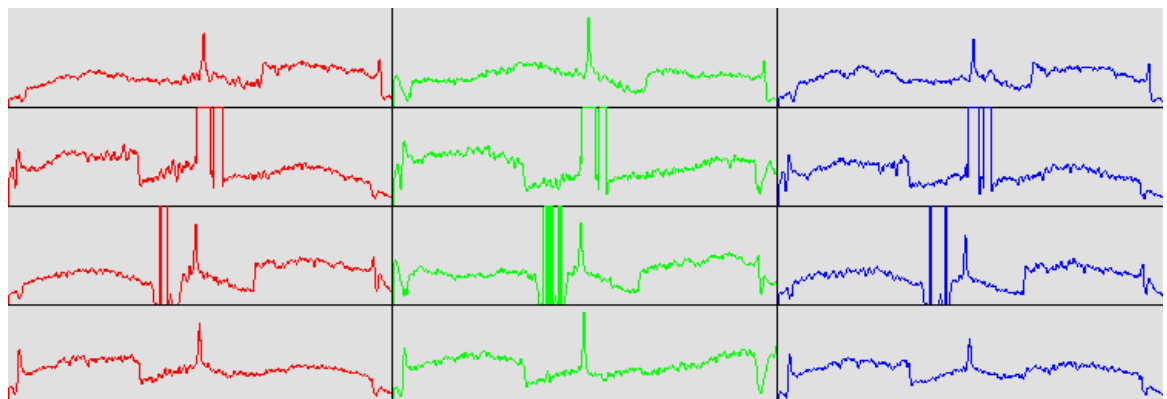
G4



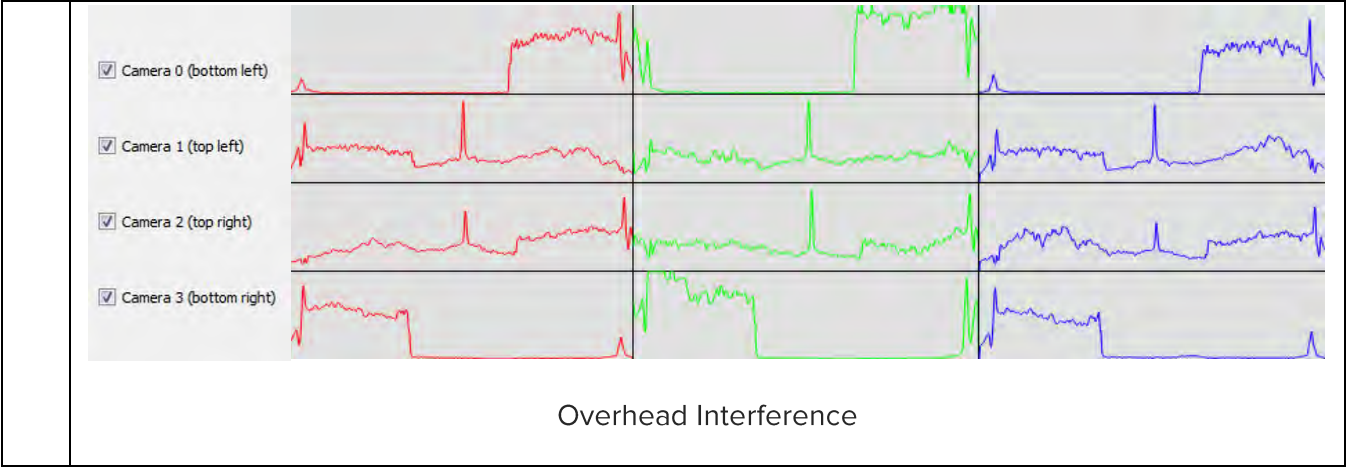
G5



Corner interference



Side Interference



Symptom: Incorrect or improper mounting. This is only a symptom seen on the G4 displays. The mounting has caused the panel to twist and warp. Note the tapered nature of the camera view.

Remove the panel from the wall, and mount and calibrate it. If the problem goes away, inspect the wall and mount for flatness and correct as required. If the problem persists you likely have permanent damage to your SMART Board. Please note this is a fault typically outside of warranty terms.

G4

