

Configuration and User's Guide

Parts Kit for SMART Board™ 560 and 580
Interactive Whiteboards and UF55 Projectors

SMART
™

Registration Benefits

If you register your SMART product, we'll notify you of new features and software upgrades.

Register online at www.smarttech.com/registration.

Keep the following information available, in case you need to contact Technical Support:

Serial Number _____

Date of Purchase _____

FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Trademark Notice

SMART Board, smarttech and the SMART logo are trademarks or registered trademarks of SMART Technologies ULC in the U.S. and/or other countries. All other third-party product and company names may be the trademarks of their respective owners.

Copyright Notice

© 2009 SMART Technologies ULC. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language in any form by any means without the prior written consent of SMART Technologies ULC. Information in this manual is subject to change without notice and does not represent a commitment on the part of SMART.

Patent No. US5448263; US6141000; US6320597; US6326954; US6326954; US6337681; US6540366; US6741267; US6747636; US7151533; US7184030; US7289113 and CA2058219. Other patents pending.

Important Information

Read This Section First

NOTE: If you own a SMART product other than a parts kit for SMART Board 560 and 580 interactive whiteboards and UF55 projectors, refer to the installation guide that came with your product for relevant warnings and maintenance instructions.

Before you install and use your parts kit for SMART Board 560 and 580 interactive whiteboards and UF55 projectors, read and understand the safety warnings and precautions in this user's guide, the *Parts Kit for SMART Board 560 and 580 Interactive Whiteboards and UF55 Projectors* ([document 134836](#)) and the [warnings document](#). These safety warnings and precautions describe the safe and correct operation of your SMART Board interactive whiteboard system and its accessories, helping you to prevent injuries and equipment damage. Always ensure that your interactive whiteboard system is being used correctly.

The UF55 projector is currently designed to work only with certain SMART Board interactive whiteboard models. Contact your [authorized SMART reseller](#) for more information.

Safety Warnings

WARNING



- If the lamp has shattered or burst, call an [authorized SMART reseller](#) for instructions. Do not attempt to replace the lamp. Do not touch the glass fragments because they might cause injury. Leave and then ventilate the area where the lamp shattered or burst. Wash your hands thoroughly if you have come into contact with lamp debris. Thoroughly clean the area around the projector, and discard any edible items placed in that area because they might be contaminated.
- The lamp used in the UF55 projector contains mercury. Recycle or dispose of it as hazardous waste, in accordance with local regulations.
- Use only replacement lamps approved by SMART Technologies. Contact your [authorized SMART reseller](#) for replacement parts.
- Turn the projector off and wait 30 minutes for the lamp to cool completely before removing the old lamp assembly.
- Never replace the lamp assembly with a previously used lamp assembly.
- Do not open or disassemble the projector as this may cause electric shock.
- Ensure that any cables extending across the floor to your SMART product are properly bundled and marked to prevent a trip hazard.
- Make sure that an electrical socket is near to your SMART product and remains easily accessible during use.
- Avoid turning off the projector during the lamp ignition phase as this may lead to premature lamp failure. Before turning the projector off, keep the lamp on for a minimum of 15 minutes after turning it on to preserve the lamp life.
- This projector detects its own remaining lamp life. Replace the lamp when lamp life warning messages appear.
- If you continue to use the projector after the replacement message appears, the lamp might shatter or burst, scattering glass throughout the projector head.
- When the lamp is approaching the end of its life, the message "Lamp is approaching the end of its useful life in full power operation" appears on the screen. Contact your [authorized SMART reseller](#) or service center to change the lamp as soon as possible.
- Remove the projector from the projector's arm before servicing the lamp. Complete the procedure described in this document before following the instructions included in your replacement lamp box.
- Do not attempt to service the projector other than performing routine lamp replacement. Service should be performed only by an authorized service provider. Other than the lamp module, there are no user-serviceable parts inside the unit.
- Replacing the lamp in a boom-mounted projector might result in fall or injury.
- Uncovering the lamp while the projector is mounted on a projector's arm might lead to product damage or personal injury from falling pieces of glass if the lamp is broken.
- Wear protective eyewear while changing the lamp. Failure to do so can cause injury or loss of eyesight if the lamp shatters or bursts.

WARNING

- To prevent premature lamp failure or exposure to mercury, always handle the fragile lamp assembly with care. Use gloves when touching the lamp. Do not touch the lamp with your fingers.
- Failure to follow the installation instructions shipped with your SMART product could result in personal injury and damage to the product.
- Two people are required to remove and mount the projector and the interactive whiteboard on a wall because they might be too heavy for one person to maneuver onto their wall-mounting brackets.
- When mounting the projector on a framed wall, you must attach both the mounting bracket and safety tether to a stud to safely support the projector's weight. If you use only drywall anchors, the drywall can fail, resulting in product damage and possible personal injury.
- Do not remove any screws other than those specified in the lamp replacement instructions.
- If you remove the bolt supporting the limit strap, the projector's arm will be free to swing. Make sure that the bolt is tightened, and never remove it from the unit without supporting the projector's arm first.
- To reduce the risk of fire or electric shock, do not expose any component of your SMART Board interactive whiteboard system to rain or moisture.
- Do not climb (or allow children to climb) on any part of your wall-mounted SMART Board interactive whiteboard system.
- Climbing on the interactive whiteboard or projector arm could result in personal injury or product damage.
- Do not stare (or allow children to stare) directly into the beam of light created by the projector. Instruct children not to look in the direction of, or stare at, this beam of light. Encourage users to keep their back to the projector when working at the interactive whiteboard. Before they turn to face the audience, users should step sideways, out of the projector's beam.
- Do not touch the head or lens of the projector because it can become extremely hot during normal operation.
- Cleaning a boom-mounted projector may result in a fall or injury.
- Don't add extra weight or apply pressure to the UF55 projector boom, the wall-mounted interactive whiteboard or its pen tray. SMART Technologies designed the brackets to support only the weight of the components during normal use.



CAUTION

- Never operate your projector immediately after moving it from a cold location to a warm location. When your projector is exposed to such a change in temperature, moisture may condense on the lens and on crucial internal parts. Allow your projector to reach room temperature before operation to prevent possible damage to your projector.
- At high altitudes, where the air is thin, the projector's cooling efficiency is reduced. Set the projector's fan mode to High in locations where the altitude is over 6000' (1828.8 m).
- Do not place in hot locations, such as near heating equipment. Doing so could cause a malfunction and shorten the life of the projector.
- Before you clean the UF55 projector, put the system into Idle mode by pressing the power button twice on the ECP or remote, and allow the bulb to cool for 30 minutes.
- Do not allow liquids or commercial solvents of any kind to flow into the projector base or head. Do not use spray cleaners or solvents near any part of the projector, as it may damage or stain the projector.
- Cycling power to the projector repeatedly can lock or damage the interactive whiteboard system. After you turn off the system, wait at least 15 minutes for cooling before starting the system.
- Do not connect your serial cable directly to the projector's RS-232 serial interface. The extended control panel's (ECP's) RS-232 serial interface is the only recommended connection point.
- You must connect the USB cable that came with your SMART Board interactive whiteboard to a computer that has a USB compliant interface and that bears the USB logo. In addition, the USB source computer must be compliant with CSA/UL/EN 60950 and bear the CE mark and CSA and/or UL Mark(s) for CAS/UL 60950. This is for operating safety and to prevent damage to the SMART Board interactive whiteboard.

IMPORTANT

- Using the UF55 projector near a TV or radio may cause interference to the images or sound. If this happens, move the TV or radio away from the projector.
- If you have peripheral devices that do not use a 4-pin mini-DIN connector or an RCA composite video jack, or if your device has an audio connection that does not use RCA jacks, you may need to purchase third-party adapters.
- Wipe the exterior of the projector using a lint-free cloth.

Other Precautions

To ensure operating safety and to prevent product damage, observe the following precautions.

- Turn off the SMART product before cleaning it.
- Use a soft lint-free cloth moistened with a mild detergent to clean the projector housing.
- Don't use abrasive cleaners, waxes or solvents to clean your SMART product.
- Disconnect the power plug from the AC outlet if your SMART product is not being used for a long period of time.
- Don't block the ventilation slots and openings on the projector.
- Don't place the interactive whiteboard system near any appliance that generates a strong magnetic field.
- Don't place the interactive whiteboard system in direct sunlight.
- Don't set up or use the interactive whiteboard system in an area with excessive levels of dust, dirt, humidity or smoke.
- To reduce the risks associated with leaking batteries:
 - use only a coin-cell type battery
 - orient the battery's plus (+) and minus (-) terminals according to the markings on the remote control
 - don't leave the battery in the remote control for an extended period
 - don't heat, disassemble, short or recharge the battery or expose it to fire or high temperatures
 - avoid eye and skin contact if the battery has a leak
 - dispose of the exhausted battery and product components in accordance with applicable regulations
- If the interactive whiteboard system requires replacement parts, make sure that the service technician uses replacement parts specified by SMART Technologies, or parts with the same characteristics as the original.

Table of Contents

Important Information	i
Read This Section First.....	i
Safety Warnings.....	ii
Other Precautions	v
Table of Contents	vii
About Your UF55 Projector Parts Kit	1
UF55 Projector System Features.....	2
Standard Accessories	3
Installing Your UF55 Projector Parts Kit	5
Environmental Requirements.....	6
Choosing a Location for Your SMART Board Interactive Whiteboard System.....	7
Adjusting the Image Alignment	8
Focusing the Image.....	14
Connecting Your Interactive Whiteboard System	15
Upgrading Your Version of SMART Board Software	15
Connecting the Cables to the UF55 Projector.....	16
Using Your Interactive Whiteboard System	23
Turning the System On and Off and Selecting an Input.....	23
After Completing the Installation	24
Using Your UF55 Projector	24
Maintaining Your UF55 Projector	29
Cleaning Your UF55 Projector	29
Transporting Your Projector	30
Troubleshooting Your Interactive Whiteboard System	31
System Warning Lights	31
Errors	32
Appendix A: Remotely Managing Your Interactive Whiteboard System	35
Programming Commands for Your SMART Board Interactive Whiteboard	
System Settings	35
Command Inventory.....	38
Appendix B: Replacing Your UF55 Projector Lamp	47
Replacing the Projector Lamp.....	47

Hardware Environmental Compliance 59

Waste Electrical and Electronic Equipment Regulations (WEEE Directive)..... 59

Restriction of Certain Chemicals (REACH Directive)..... 59

Restriction of Certain Hazardous Substances (RoHS) Directives..... 59

Batteries 59

Packaging 59

China's Electronic Information Products Regulations 60

U.S. Consumer Product Safety Improvement Act..... 60

Customer Support 61

Online Information and Support 61

Training 61

Technical Support..... 61

Shipping and Repair Status..... 61

General Inquiries..... 61

Registration 61

Warranty 62

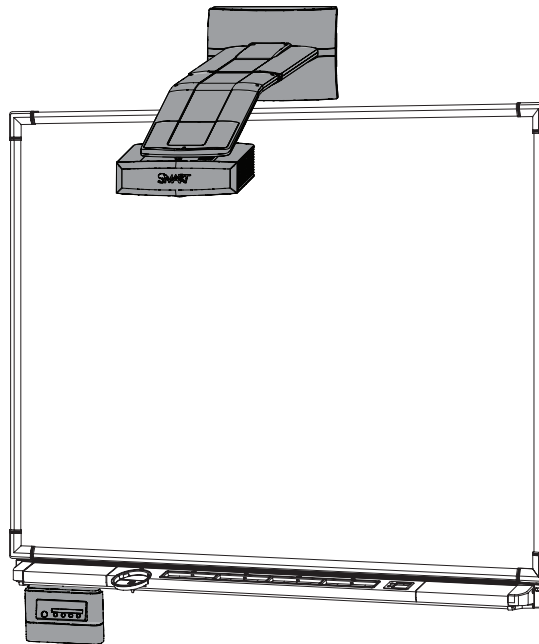
Index 61

About Your UF55 Projector Parts Kit

Your UF55 projector parts kit enables you to combine the SMART UF55 wall-mounted short-throw projector with your SMART Board 580 or 560 interactive whiteboard to create a complete interactive whiteboard system.

The following topics describe the features of the components and accessories included in your parts kit.

- UF55 Projector System Features (page 2)
- Standard Accessories (page 3)
 - ECP and Cable (page 3)
 - UF55 Remote Control (page 3)



UF55 Projector System Features

The UF55 projector system includes a short-throw projector for use with SMART Board interactive whiteboards, an extended control panel (ECP) and a sturdy support system for classroom environments. The projector system has the following features:

- A wall-mounted, high-offset SBP-10X (for XGA or UF55) projector engine that uses DLP® technology by Texas Instruments®, providing Brilliant Color™ performance and quality Gamma 2.2 correction with High Brightness, Standard and True Color modes
- Safety-oriented design that includes a boom support with a controlled-collapse feature
- PAL, PAL-N, PAL-M, SECAM, NTSC and NTSC 4.43 video system compatibility
- Composite, S-video and VESA RGB with additional interface support for Component YPbPr and Component YCbCr inputs with proper adapters (not included)
- WXGA, QVGA, VGA, SVGA, XGA, SXGA, SXGA+ and UXGA video format compatibility
- 1024 × 768 resolution
- Serial RS-232 interface on the ECP for connecting a room control system
- Self-protection timer for a hot re-strike of the projector lamp
- Protected cable routing through the projector housing and a cable cover to prevent tampering and clutter
- A secure mounting and installation system that includes:
 - A projector padlock loop
 - Mounting hardware for solid masonry or framed wall installations
 - Templates and instructions for positioning the system in a safe manner

Standard Accessories

SMART provides the following accessories with your UF55 projector parts kit. If you need to purchase replacements, contact your [authorized SMART reseller](#).

ECP and Cable

The interactive whiteboard system's ECP features connectors for three inputs and control for four inputs, including the direct HD-DB15 RGB connection to the projector. Direct inputs supported include:

- A single HD-DB15 (RGB) input connector and associated audio (3.5 mm jack) for RGB or component video and HDTV sources (YPbPr/YCbCr with proper adapters, not included)
- An S-video (4-pin mini-DIN) and associated audio (two RCA jacks)
- A composite video (RCA jack) and associated audio (two RCA jacks)


A specialized harness cable provided by SMART allows output to the projector.

UF55 Remote Control

The remote control lets you control the system and set up your UF55 projector. Use the remote control to access menu options, system information and input selection options.



Installing Your UF55 Projector Parts Kit

IMPORTANT 	Use the instructions from the UF55 projector boxes to install your parts kit, including the projector and ECP mounting template. Don't use the instructions in your SMART Board interactive whiteboard product box.
---	---

The following sections include additional information, optional procedures and tips to consider when you install your SMART Board interactive whiteboard system with the UF55 projector parts kit.

- Environmental Requirements (page 6)
- Choosing a Location for Your Interactive Whiteboard System (page 7)
 - Recommended Heights for Mounting (page 7)
- Adjusting the Image Alignment (page 8)
 - Diagnosing Alignment Errors (page 8)
 - Performing an Image Alignment (page 9)
- Focusing the Image (page 14)

Environmental Requirements

Before installing your UF55 projector parts kit, review the following environmental requirements.

CAUTION



- Never operate your projector immediately after moving it from a cold location to a warm location. When your projector is exposed to such a change in temperature, moisture might condense on the lens and on crucial internal parts. Allow your projector to reach room temperature before operation to prevent possible damage to your projector.
- At high altitudes, where the air is thin, the projector's cooling efficiency is reduced. Set the projector's fan mode to High in locations where the altitude is over 6000' (1828.8 m).
- Do not place the projector in hot locations, such as near heating equipment. Doing so could cause a malfunction and shorten the life of the projector.

Environmental Requirement	Parameter
Operating Temperature	<ul style="list-style-type: none">• 41°F to 95°F (5°C to 35°C) from sea level to an altitude up to 6000' (0 m to 1828.8 m)• 41°F to 86°F (5°C to 30°C) from 6000' to 9800' (1828.8 m to 2987 m)
Storage Temperature	-40°F to 122°F (-40°C to 50°C)
Humidity	30% to 70% relative humidity, non-condensing
Water and Fluid Resistance	<ul style="list-style-type: none">• Intended for indoor use. SMART Board interactive whiteboard systems do not meet any salt-spray or water ingress requirements.• Don't pour or spray liquids directly on interactive whiteboard, the projector or any of its sub-components. These liquids might get into areas where they could damage sensitive electronic components.
Dust and Scratching	<ul style="list-style-type: none">• For use in office and classroom environments• Not for industrial use, where heavy dust and pollutants can cause malfunctions or impaired operation• Designed for pollution degree 1 (P1) as per EN61558-1, which is defined as "No pollution or only dry non-conductive pollution"
Electrostatic Discharge (ESD)	<ul style="list-style-type: none">• EN61000-4-2 severity level 4 for direct and indirect ESD• No malfunction or damage up to 8 kV (both polarities) with a 330 ohm, 150 pF probe (air discharge)• Unmated connectors meet no malfunction or damage up to 4 kV for direct (contact) discharge.
Conducted and Radiated Emissions	EN55022/CISPR 22, Class A

Choosing a Location for Your SMART Board Interactive Whiteboard System

Choose a location for your SMART Board interactive whiteboard system that's far from bright light sources and direct sunlight such as a window or overhead lighting. Bright light sources can cause distracting shadows on the interactive whiteboard and reduce the contrast of the projected image.

IMPORTANT



Using the UF55 projector near a TV or radio might cause interference to the images or sound. If this happens, move the TV or radio away from the projector.

Locate a wall with a flat, regular surface and minimum clearance to accommodate your interactive whiteboard system. Make sure that the UF55 projector and the SMART Board interactive whiteboard are installed on the same flat surface. For best presentation alignment, SMART recommends that you mount your interactive whiteboard system in a location that is central to your audience's viewing direction. For mobile installation or adjustable installation options, contact your [authorized SMART reseller](#). If the mounting surface is slightly irregular or if you're unable to mount the interactive whiteboard system directly on a stud, consult the *Reinforcing a SMART Board 600i3 Series Interactive Whiteboard System Wall Mount Installation with a Backer Board (document 135075)* on the [SMART Support website](#).

Recommended Heights for Mounting

SMART includes a mounting template with each of its UF55 projector parts kits. If you lose this template, contact your [authorized SMART reseller](#). Using this template ensures that you:

- Mount the UF55 projector at a safe height for head-space clearance, while maintaining enough space for airflow and installation access above the projector.
- Position the projector at the correct height above the interactive whiteboard to make sure that the projected image aligns with the touch screen.

Dimensions on the template recommend a distance from the floor that is suitable for adults of average height. Consider the general height of your user community when you choose a position for the interactive whiteboard, and consult your local regulations before mounting your interactive whiteboard.

WARNING



- When mounting the projector on a framed wall, you must attach both the mounting bracket and safety tether to a stud to safely support the projector's weight. If you use only drywall anchors, the drywall can fail, resulting in product damage and possible personal injury.
- If you remove the bolt supporting the limit strap, the projector boom will be free to swing. Make sure that the bolt is tightened, and never remove it from the unit without supporting the projector boom first.
- Failure to follow the installation instructions shipped with your SMART product could result in personal injury and damage to the product.
- Two people are required to mount the projector and the interactive whiteboard on a wall because they might be too heavy for one person to maneuver onto their wall-mounting brackets.

Adjusting the Image Alignment

After you install the UF55 projector with your SMART Board 500 series interactive whiteboard, you must adjust the image alignment.

Diagnosing Alignment Errors

Keystone errors occur when the projected image isn't perpendicular to the screen.



From the projector, the image path is shorter along the top.



From the projector, the image path is shorter along the bottom.

The image appears shorter across the top when the distance from the projector to the top of the screen is shorter than the distance to the bottom of the screen. The image appears shorter across the bottom when the distance from the projector to the bottom of the screen is shorter than the distance to the top of the screen. Vertical keystone errors can occur when you mount the UF55 projector and the SMART Board interactive whiteboard on an uneven surface or a wall that has obstructions.

Horizontal keystone errors can occur when you swivel the UF55 projector too far from the SMART Board interactive whiteboard's vertical center, when you mount the projector and the interactive whiteboard on an uneven surface or when the interactive whiteboard is slightly closer to the projector on one side than the other.



From the projector, the image path is shorter along the right side.



From the projector, the image path is shorter along the left side.

The image appears shorter across the right side when the distance from the projector to the right of the screen is shorter than the distance to the left of the screen. The image appears shorter across the left side of the image when the distance from the projector to the left of the screen is shorter than the distance to the right of the screen.

Adjust the interactive whiteboard side to side to center the image (from the projector), as illustrated in the installation document, the *Parts Kit for SMART Board 560 and 580 Interactive Whiteboards and UF55 Projectors* ([document 134836](#)). This eliminates many keystone errors. If your installation environment prevents you from moving the interactive whiteboard, you can adjust the projector boom for optimal image alignment.

NOTES

- If you move the interactive whiteboard system to a new location, you must re-adjust it.
- If your projector requires service, you must adjust the replacement projector.

WARNING



Two people are required to mount the projector and the interactive whiteboard on a wall because the items might be too heavy for one person to maneuver onto the wall-mounting brackets.

Performing an Image Alignment

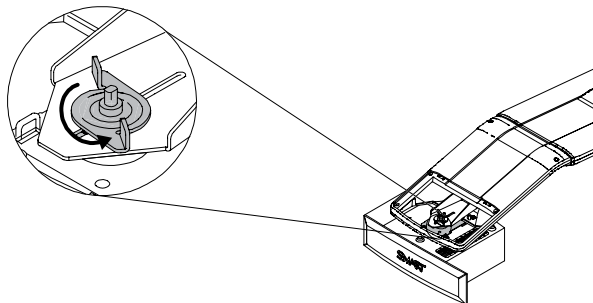
Use this procedure to obtain a rectangular image that is slightly smaller than the interactive whiteboard's screen.

NOTES

- Project a computer image (set to the proper resolution) while performing the following steps. If you don't have a computer, use the projector's default blue background so that you can see the full projected image clearly.
- SMART doesn't recommend adjusting the digital keystone within the projector. Instead, use the mechanical adjustment described below.
- Ensure that you remove the plastic lens cover from the projector.

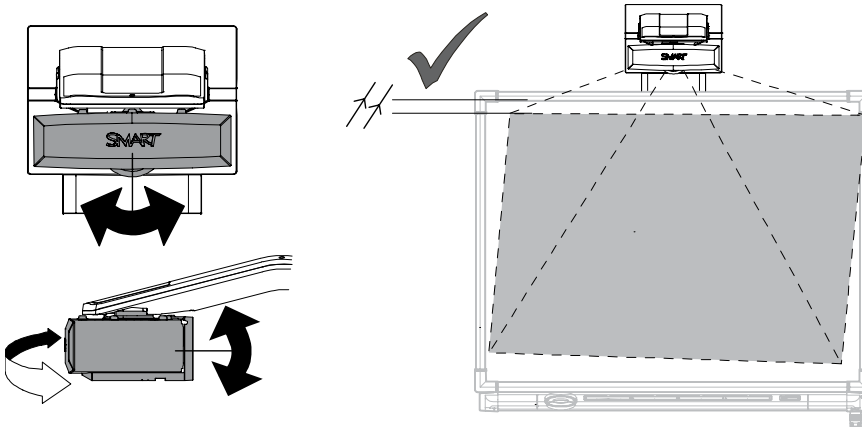
To perform an image alignment

1. Align the top of the projected image so that it's parallel with the top edge of the interactive whiteboard's surface.
 - a. Loosen the large wingnut on the top of the ball joint to allow the projector to move as needed.



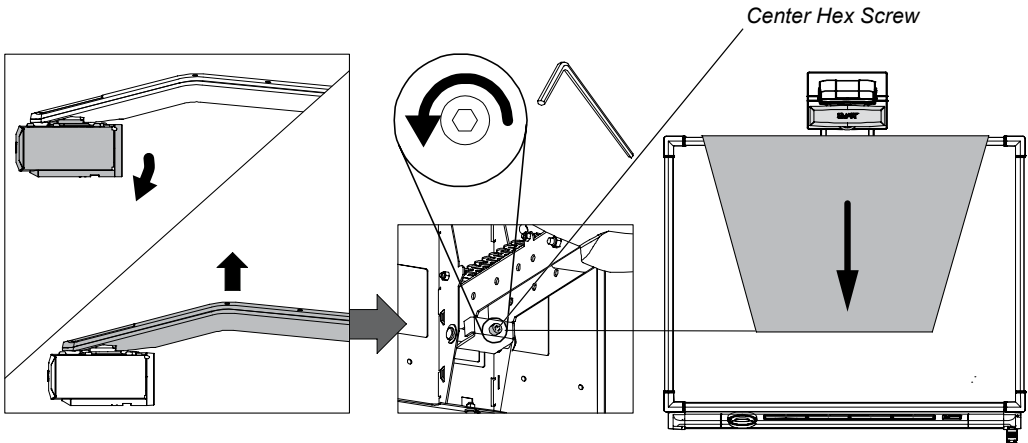
NOTE: Don't loosen the wingnut too much or the projector will not hold the adjustments.

- b. Tilt the projector left or right, up or down, or move it from side to side, until the top edge of the projector image is parallel with the top edge of the interactive whiteboard.



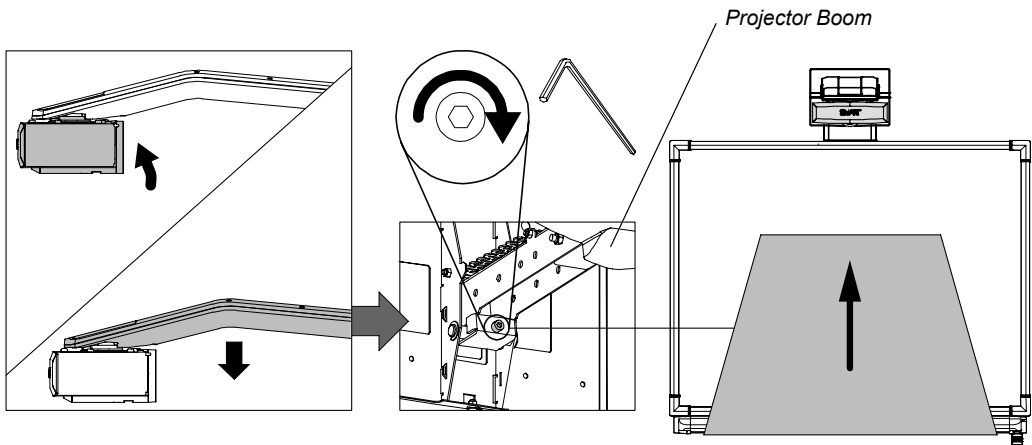
2. Adjust the vertical keystone alignment for the projected image.

- a. If the bottom edge of the projected image is smaller than the top edge of the projected image, and the sides of the projected image slope inward toward the bottom of the projected image, tilt the projector down or raise the projector's mounting boom to lower the image. Turn the center hex screw at the base of the boom counter-clockwise using a 6 mm hex key (not supplied) to raise the boom.



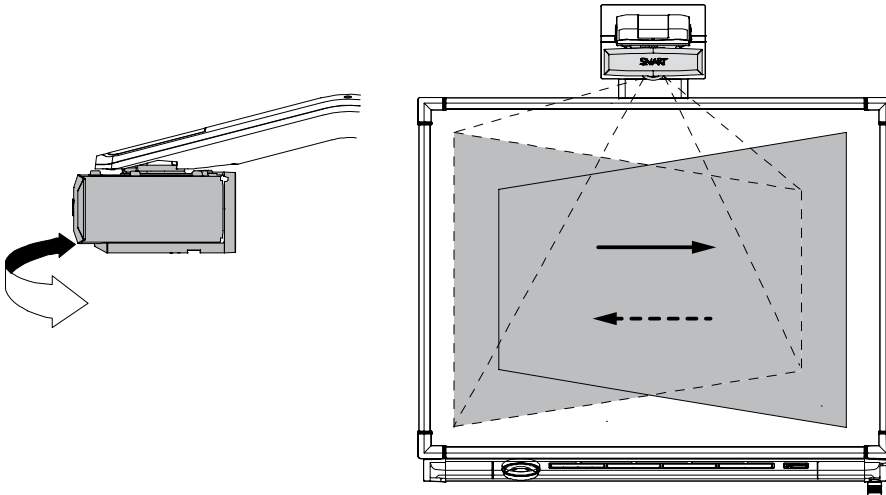
- b. If the bottom edge of the projected image is larger than the top edge of the projected image, and the sides of the projected image slope outwards toward the bottom of the projected image, tilt the projector up or lower the projector's mounting boom to raise the image. Turn the center hex screw at the base of the boom clockwise using a 6 mm hex key (not supplied) to lower the boom and tilt the projector forward and back.

NOTE: The entire projected image may increase slightly in size during this process, more so at the bottom of the projected image than at the top.



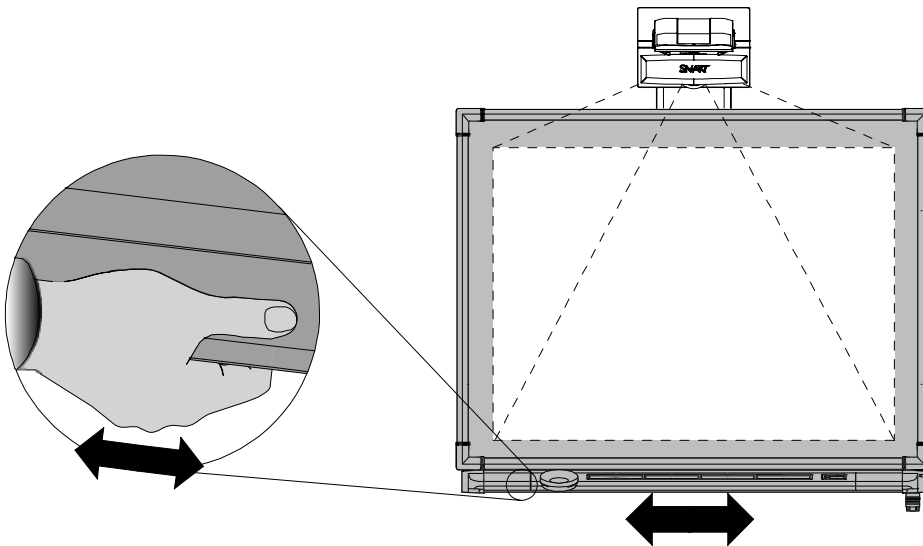
3. Adjust the projected image's horizontal alignment by turning the projector left or right, until the top and bottom edges of the projected image are horizontally parallel.

NOTE: Don't pay attention to the position of the left and right edges in relation to the interactive whiteboard during this step.



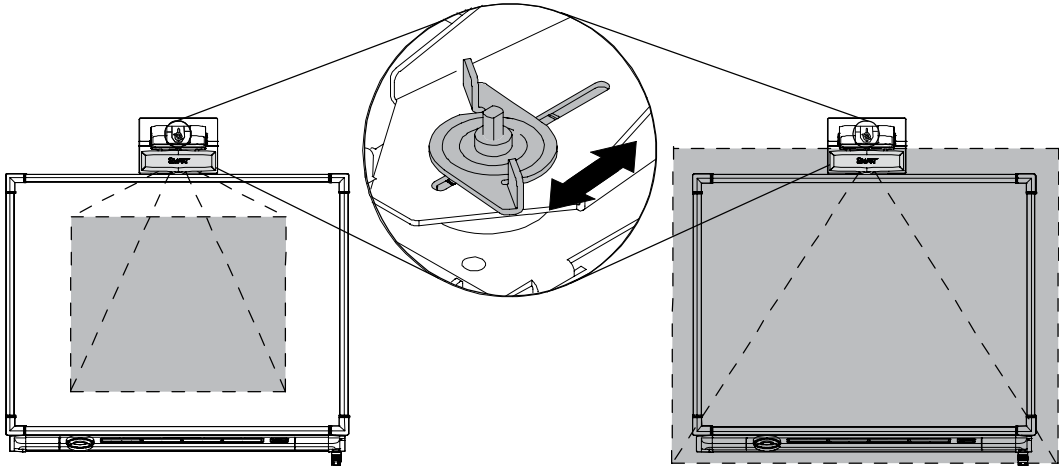
4. Align the interactive whiteboard with the projected image.

NOTE: Move your SMART Board interactive whiteboard left or right on its mounting bracket to center the image on the interactive whiteboard.



5. Adjust the physical size of the projected image to fit the interactive whiteboard.
 - a. If you haven't already done so, loosen the large wingnut on the top of the ball joint to allow the projector to move backward and forward in the slot.
 - b. Move the projector backward or forward on the boom to make the image larger or smaller.

NOTE: During this step, you may need to tilt or turn the projector slightly to keep the image square.



6. Focus the projector using the focus lever (see Focusing the Image on page 14).

NOTE: You may need to repeat all steps in smaller increments in order to fine-tune the image.
7. Tighten the large wingnut on the top of the ball joint.

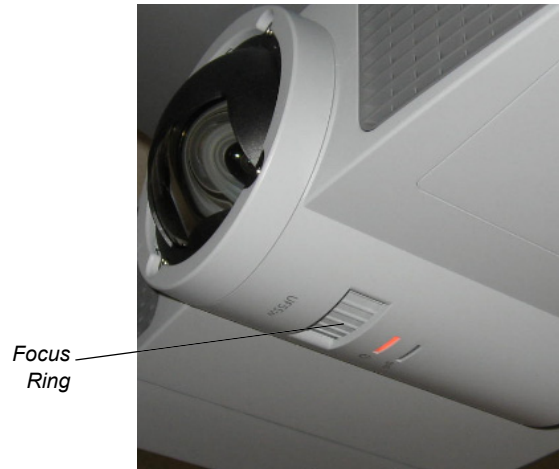
Focusing the Image

NOTE: Ensure that you remove the plastic lens cover from the projector.

To focus the projected image, use the Focus Ring, located on the bottom of the UF55 projector (when the projector is attached to the boom).

To focus and adjust the image

Rotate the Focus Ring lever right or left until the image is clear.



Connecting Your Interactive Whiteboard System

When you connect a computer with SMART Notebook software to your interactive whiteboard system, you can display and interact with Ink Aware programs on your SMART Board interactive whiteboard. You can connect the video output of a hardware device, such as a DVD/Blu-ray player or VCR, to the interactive whiteboard system's ECP to display this video signal on your system.

Refer to your *Parts Kit for SMART Board 560 and 580 Interactive Whiteboards and UF55 Projectors* ([document 134836](#)) to perform initial connection setup on your SMART Board interactive whiteboard system. This chapter includes software installation instructions, precautions to follow and methods to use when installing a new device for your interactive whiteboard system.

- Upgrading Your Version of SMART Board Software ([this page](#))
- Connecting the Cables to the UF55 Projector ([page 16](#))
 - Routing the Cables ([page 16](#))
 - Connecting Audio/Visual Outputs from Your Guest Computer to Your Interactive Whiteboard System's ECP Input ([page 20](#))
 - Connecting Peripheral Visual or Audio-Visual Devices ([page 21](#))

To connect your 500 series interactive whiteboard, refer to the *SMART Board 500 Series Setup Instructions* ([document 1247](#)). To connect accessories to your SMART Board interactive whiteboard, refer to the documents included with the accessories and consult the [SMART Support website](#) for additional instructions. When connecting a guest computer or a host computer to your interactive whiteboard system, make sure that the computer in use for the presentation is connected to your SMART Board interactive whiteboard.

Upgrading Your Version of SMART Board Software

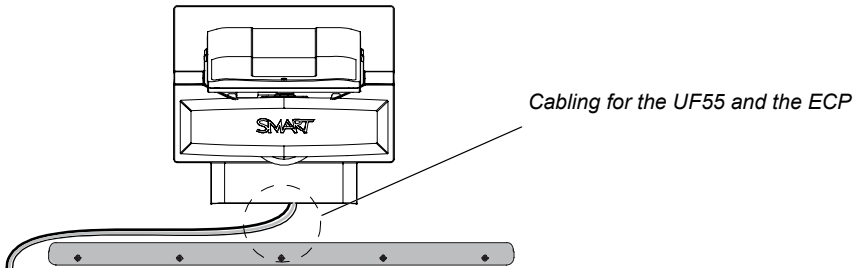
If SMART Board software or SMART Notebook software is already installed on your computer, you can take this opportunity to upgrade your software to ensure compatibility. SMART Notebook software upgrades and online Help are available at www.smarttech.com/support/software/index.asp. This page also lists the minimum hardware requirements for each software version.

Connecting the Cables to the UF55 Projector

Refer to the following diagrams as you connect the cables to the projector.

Routing the Cables

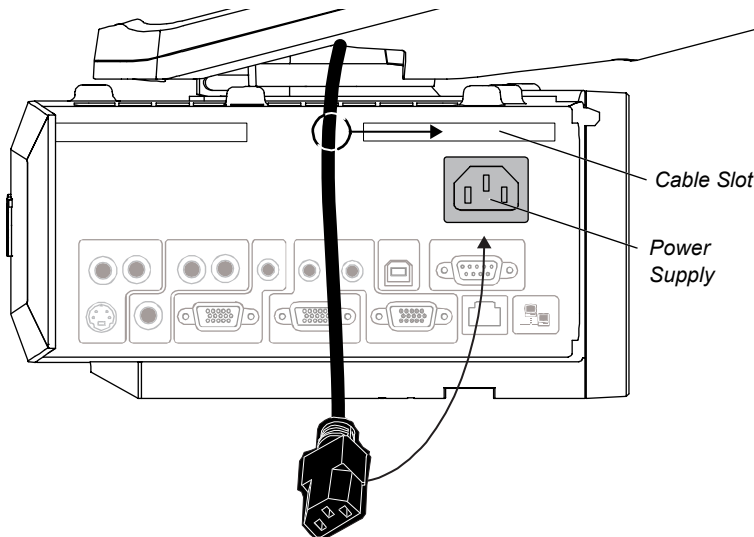
When connecting cables from the UF55 projector to the 560 or 580 interactive whiteboard, make sure all cables pass along the top of the mounting bracket and down the left or right side of the interactive whiteboard.



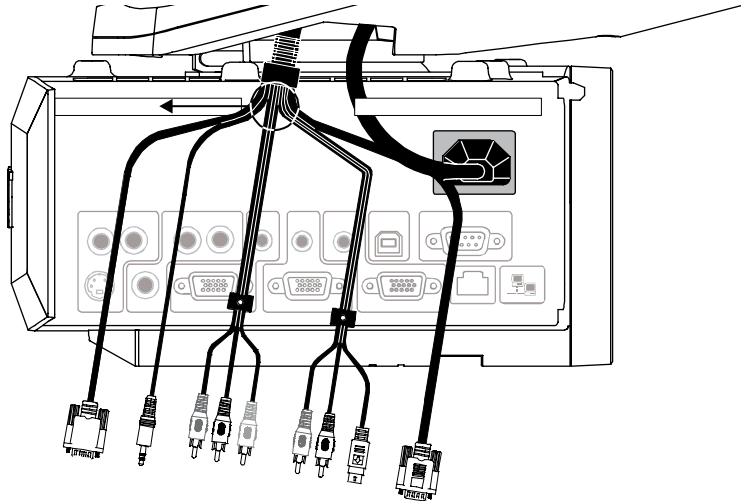
To connect the power, ECP and network cables to the projector

1. Remove the projector's cable cover.
2. Pass the cable through the boom, and then connect it to the power supply receptacle. Make sure that the power cable is in the farthest position to the right in the cable slot.

NOTE: Don't connect the power cable to a power outlet until all cables are connected to the projector.

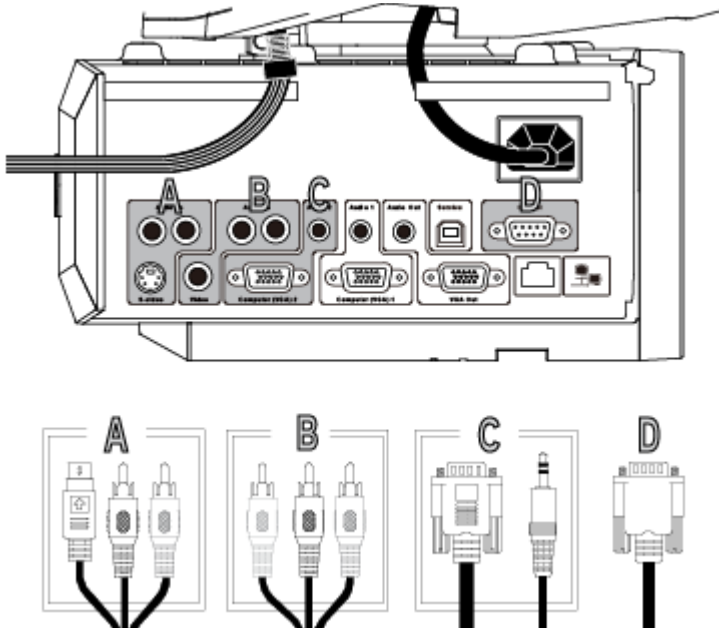


3. Pass the ECP cable through the boom. The upper portion of the ECP cable is too thick to fit inside the cable slot. Put all the cables on the thinner portion of the ECP in the cable slot to the left instead.

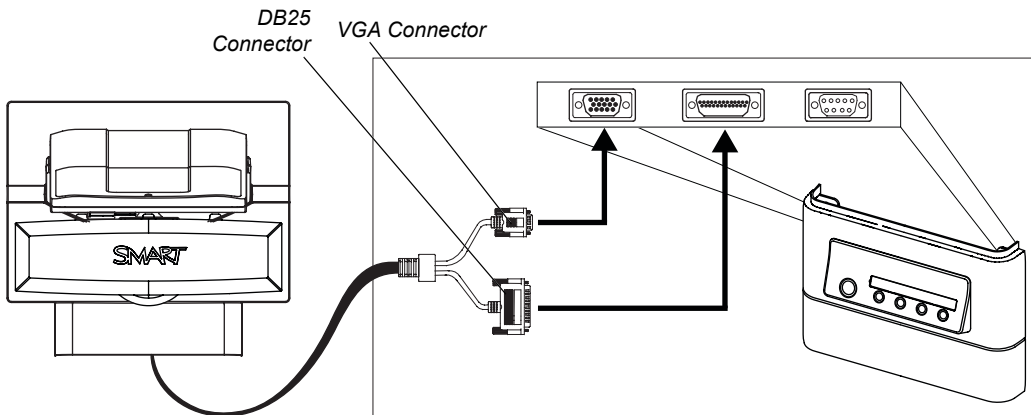


4. Set up the ECP cabling by connecting each section separately.
 - a. Connect the S-Video and two Audio cables from the ECP to the receptacles in section A.
 - b. Connect the Video and two Audio cables from the ECP to the receptacles in section B.
 - c. Connect the Audio 2 and Computer 2 VGA cables to the receptacles in section C.

- d. Connect the ECP DB9 control cable from the ECP to the DB9 socket in section D.

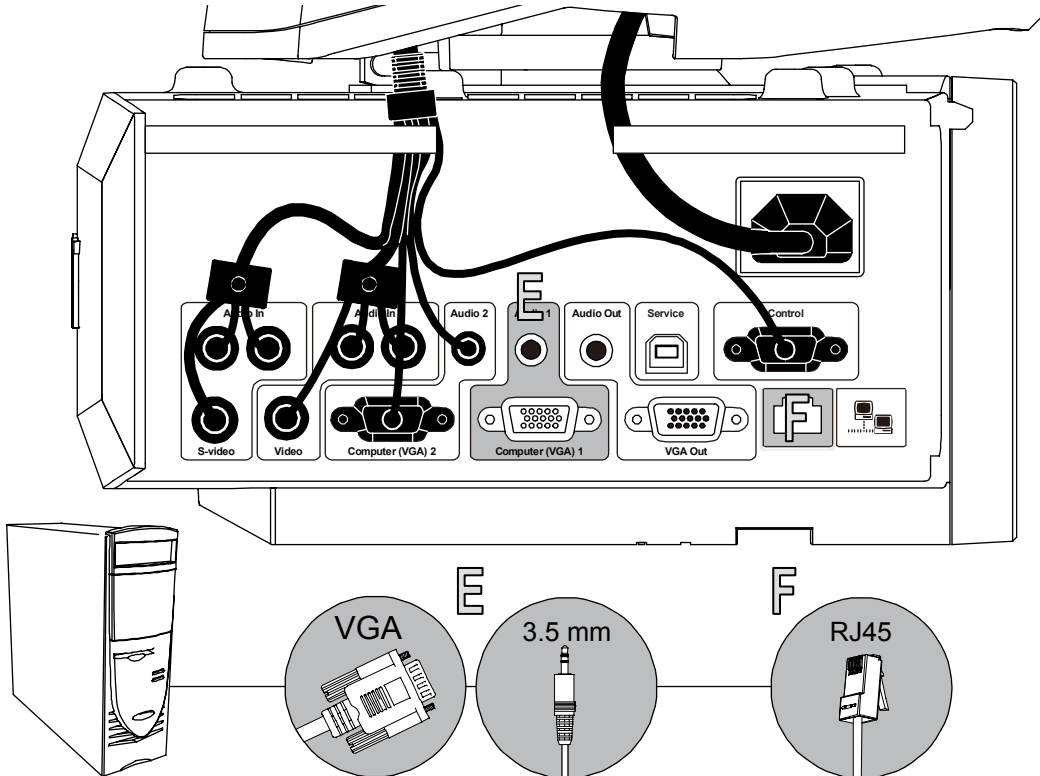


5. Connect the VESA RGB (VGA) connector and the DB25 connector from the harness cable to the ECP.



6. Pass the Audio, VGA and network cables (not supplied) through the boom, and connect them to your projector.
 - a. Connect the Audio 1 and Computer 1 VGA from your external computer (section E).
 - b. Connect the RJ45 network cable from your external LAN receptacle (section F).

NOTE: These cables are for optional equipment.



7. Replace the projector's cable cover.
8. Connect the projector's power cable to an outlet.

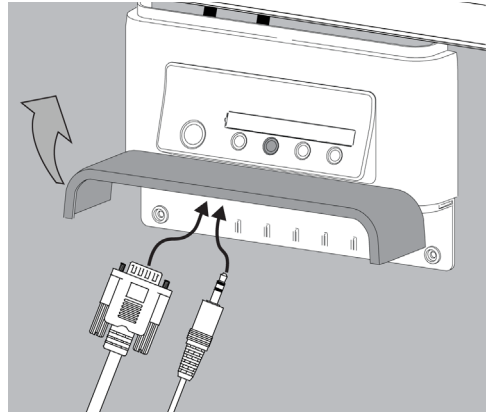
Connecting Audio/Visual Outputs from Your Guest Computer to Your Interactive Whiteboard System's ECP Input

IMPORTANT Use the VGA connector on the ECP to connect your guest computer's video output. If you do not have a guest computer, you can use the VGA connector on the ECP to connect your host computer's video output.

Most laptops require configuration to output VGA signals.

To connect your guest computer's video or audio output to your ECP

1. Turn off your interactive whiteboard system.
2. Make sure that you have a shielded VGA cable (not included) and an audio cable with 3.5 mm plugs (optional, not included) that are long enough to connect your guest computer to your ECP.
3. Connect the VGA cable to the VGA input on the bottom of your ECP. Input 2 is the VGA connector. Connect the other end of your VGA cable to your computer's video output.
4. If you're connecting audio, connect your audio cable to the audio input, and then connect the other end of the audio cable to your computer's audio output.



IMPORTANT Your interactive whiteboard system does not include speakers. To play audio, connect an audio system to the projector's audio output. Contact your [authorized SMART reseller](#) to determine your audio output options.

Connecting Peripheral Visual or Audio-Visual Devices

To connect a DVD/Blu-ray player, VCR, document camera, digital camera or other visual or audio-visual peripheral device to the SMART Board interactive whiteboard system, you must connect the device's video and audio outputs to the ECP. You can have up to three peripheral devices and a host computer connected at one time.

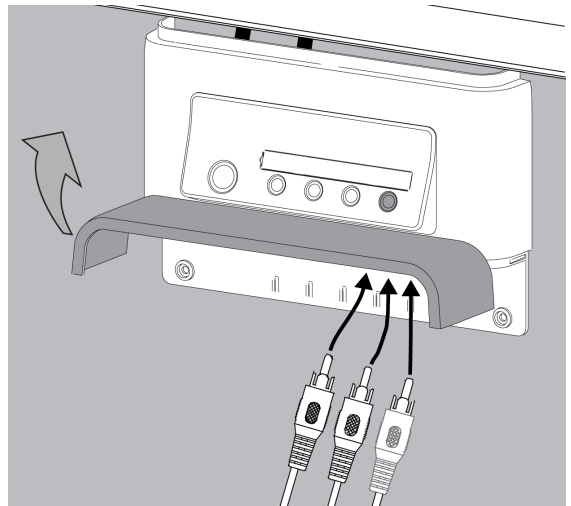
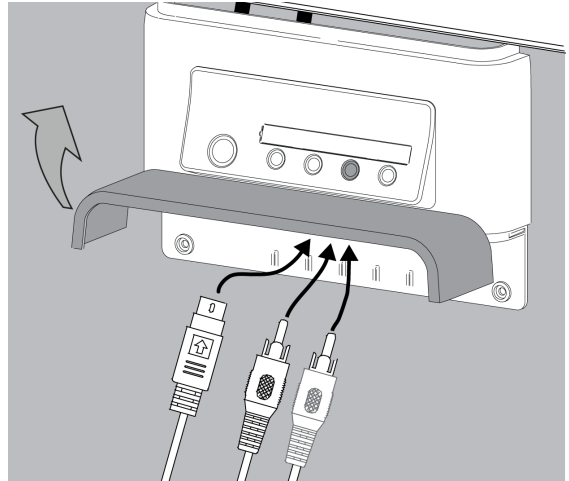
To connect S-video, composite and other audio-visual inputs for peripheral devices

IMPORTANT



If you have peripheral devices that do not use a 4-pin mini-DIN connector or an RCA composite video jack, or if your device has an audio connection that does not use RCA jacks, you may need to purchase third-party adapters.

1. Turn off your interactive whiteboard system.
2. Connect the device's video cables to the ECP using the appropriate inputs. Input 2 is the VGA connector, input 3 is the S-video 4-pin mini-DIN connector and input 4 is the composite video input.
3. For each peripheral device, connect the device's audio cables to the associated red and white RCA jacks next to the appropriate video input.



Using Your Interactive Whiteboard System

This chapter describes the basic operation of your interactive whiteboard system, how to retrieve system information and how to access the projector's image adjustment options.

- Turning the System On and Off and Selecting an Input (this page)
- After Completing the Installation (page 24)
- Using Your UF55 Projector (page 24)
 - Using Your Remote Control (page 24)
 - Menu Options (page 25)

Turning the System On and Off and Selecting an Input

Your ECP has a **Power** button and four **Input Selection** buttons. You can connect up to three peripheral devices and one host computer at the same time. You can add your own labels to the ECP buttons.

To turn on the interactive whiteboard system and select an input

1. Press the ECP's **Power** button to turn on the system.
2. Press an **Input Selection** button to select a video source.
3. When you want to turn off the system, press the ECP's **Power** button twice.

NOTE: Depending on the video source, it may take several seconds for the video signal to display.

TIP



Consider leaving the system on between uses. Repeatedly turning the system on and off can reduce the lamp's life span.

After Completing the Installation


When you connect your interactive whiteboard system to a computer with SMART Board or SMART Notebook software installed, the computer interprets your touch on the interactive screen as left mouse clicks and moves the mouse pointer to the corresponding point on the screen. You can also write over your desktop or any open application with digital ink, and then capture and save these notes to a Notebook file for future reference and distribution. The full capabilities of SMART Notebook software include SMART Board tools and a wide range of digital content.

For more information on SMART Board or SMART Notebook software, access the software's online **Help** system.

Using Your UF55 Projector








The UF55 projector includes two LED indicators. You can view the Power and Temperature status indicators on the projector's underside to determine the projector status and to troubleshoot unexpected behavior.

Using Your Remote Control

The UF55 projector remote control enables you to open on-screen projector menus and change the projector settings. You can also use the remote control's **ON/IDLE**  button or the ECP **Power** button to turn the projector on or off.

You can access the projector's settings through the remote control's **Menu** button.



To adjust settings using the remote control




1. Press the **left**  or **right**  button to access a menu option.
2. Press the **up**  or **down**  button to select the relevant menu option.
3. Press the **left**  or **right**  button to move between menu option settings.
4. Press **enter**  when you are satisfied with the settings.




NOTE: Ensure that the plastic casing on the remote control battery is removed before using the remote control.

Menu Options

The menu heading at the top of all settings is **SMART UF55 Settings**.

Menu Heading	Settings	Description
 Image Adjustment	Display Mode	This option adjusts the display output to User , sRGB , Dark Classroom and Bright Classroom .
	Brightness	This option adjusts projector brightness from 0 to 100.
	Contrast	This option adjusts projector contrast from 0 to 100.
	Frequency	This option adjusts the frequency of the projected image from -5 to 5. Default is set to 0. This setting applies to the VGA inputs only.
	Tracking	This option synchronizes your display timing with your computer's graphic card from 0 to 31. This setting applies to the VGA inputs only.
	H-position	This option adjusts the horizontal position of the projected image from 0 to 100. NOTE: Don't adjust this option unless advised to do so by a certified SMART Technical Support Specialist. These settings can be applied only after you make all other changes to the boom. This setting applies to the VGA inputs only.
	V-position	This option adjusts the vertical position of the projected image from -5 to 5. NOTE: Do not adjust this option unless advised to do so by a certified SMART Technical Support Specialist. These settings can be applied only after all other changes to the boom are made. This setting applies to the VGA inputs only.
	Saturation	This option adjusts the image from black and white to saturated color from 0 to 100. This setting applies to the S-video and Composite inputs only.
	Sharpness	This option adjusts projector contrast from 0 to 31. This setting applies to the S-video and Composite inputs only.
	Tint	This option adjusts the image color balance of red and green from 0 to 100. This setting applies to the S-video and Composite inputs only.
	White Peaking	This option adjusts the image color brightness from 0 to 10.
	Degamma	This option adjusts the color performance of the display from 0 to 3.
 Audio Control	Color	This option adjusts your individual color settings.
	Volume	This option increases and decreases volume from -20 to 20.

Menu Heading	Settings	Description
 Audio Control	Mute, Disable Volume Control and Closed Captioning	Use these options to turn your settings On or Off .
	Closed Captioning Language	This option adjusts the closed captioning language to CC1 or CC2 .
 Default Settings	Auto Signal Detect	Select On to scan until the first input signal is found, or select Off to keep signal detection in one input connector.
	Lamp Reminder	Select On or Off to show or hide the warning message when the change lamp message appears.
	Lamp Mode	Use this option to adjust brightness to Standard or Economy .
	Auto Power Off (minutes)	Use this option to set the countdown timer from 0 to 180 minutes.
	Zoom	Use this option to adjust the zoom in or out from 0 to 30. The settings will change the image settings when they're done mechanically with the boom.
	Projector ID	Use this option to set the projector ID number from 0 to 99.
	Keystone	This option adjusts the vertical keystone on the projector from -40 to 40. NOTE: Do not adjust this option unless advised to do so by a certified SMART Technical Support Specialist
	Aspect Ratio	This options adjusts the image output to Fill Screen , Match Input or 16:9 .
	Start up Screen	This option selects the type of start up screen to SMART/User , Capture User Start up Screen or Preview Start up Screen .
	Set to Default	This option (On or Off) resets all of your projector settings to their factory defaults. NOTE: Do not adjust this option unless you want to reset all of the applied settings, or unless you are advised to do so by a certified SMART Technical Support Specialist
 Network Settings	Status	This screen displays the network connection status as Connected or Disconnected .
	DHCP	This option turns the network DHCP On or Off .
	Password Reminder	This option allows you to send an email password to yourself, using Web Management.

Menu Heading	Settings	Description
 Network Settings	IP Address	This option displays your IP address in x.x.x.x format.
	Subnet Mask	This option displays your subnet mask number in x.x.x.x format.
	Gateway	This option displays your default gateway of the network to the projector in x.x.x.x format.
	DNS	This option displays your DNS number in x.x.x.x format.
	MAC Address	This option displays your MAC address in xx-xx-xx-xx-xx-xx format.
	Group Name	This option displays your group name.
	Projector Name	This option displays your projector name.
	Location	This option displays your location.
	Contact	This option displays your contact information.
 Multiple Languages	Language	Projector menu support is available in Brazilian Portuguese, Czech, Danish, Dutch, English (default), Finnish, French, German, Greek, Iberian Portuguese, Italian, Japanese, Korean, Norwegian, Polish, Russian, simplified Chinese, Spanish, Swedish and traditional Chinese.
 Projector Information	Lamp Hours	This field shows the duration of your projector lamp's use in xxxx format, from when it was reset last.
	Input	This field shows your input connector type.
	Resolution	This field shows your current display resolution.
	Firmware Version	This field shows your projector firmware version in x.x.x.x format.
	MPU Version	This field shows your projector MPU version.
	Network Version	This field shows your projector network version.
	Model Number	This field shows your projector model number.
	Serial Number	This field shows your projector serial number.

For more information on Web Management, Home Page and the Control Panel, see the *UF55/UF55w Projector User's Guide* ([document 133564](#))

Maintaining Your UF55 Projector

This chapter includes methods for properly cleaning and for preventing damage to your SMART Board interactive whiteboard system.

- Cleaning Your UF55 Projector (this page)
- Transporting Your Projector (page 30)

Cleaning Your UF55 Projector

WARNING



Cleaning a boom-mounted projector may result in a fall and injury.

CAUTION



- Before you clean the UF55 projector, put the system into Idle mode by pressing the power button twice on the ECP or remote, and allow the bulb to cool for 30 minutes.
- Do not allow liquids or commercial solvents of any kind to flow into the projector base or head. Do not use spray cleaners or solvents near any part of the projector, as it may damage or stain the projector.

IMPORTANT



Wipe the exterior of the projector using a lint-free cloth.

Follow these guidelines to clean the projector:

- Avoid touching the lens. If necessary, use liquids or commercial solvents (such as glass cleaners) to clean the lens, but don't spray them directly on the system.
- If wiping the lens is unavoidable, use protective gloves and dip a lint-free cloth (such as Purestat® PW2004) in an anti-static solvent (such as Hyperclean® EE-6310).
- Make sure you gently wipe the lens from the center to the outer area.

Spraying the system might spread a chemical mist on some of the projector's components and lamp, resulting in damage and poor image quality.

Transporting Your Projector

Save your original UF55 projector parts kit packaging so that it's available if you need to transport your system. When required, repack it with as much of the original packaging as possible. This packaging was designed with optimal shock and vibration protection. If your original packaging is no longer available, you can purchase replacement packaging from your [authorized SMART reseller](#).

Troubleshooting Your Interactive Whiteboard System

This chapter provides basic troubleshooting information for your SMART Board interactive whiteboard system. For issues not mentioned in this section, please contact your [authorized SMART reseller](#) or consult the [SMART Support website](#). Topics include the following:

- System Warning Lights (this page)
 - ECP Ready Light and System Status (this page)
 - Projector Ready Lights and Projector Status (page 31)
- Errors (page 32)
 - Temperature Exceeded (page 32)
 - Fan Failure (page 33)
 - Color Wheel Failure (page 33)
 - Lamp Failure (page 33)
 - Ready Light Isn't Lit (page 34)

System Warning Lights


ECP Ready Light and System Status

The ECP ready light is located on the ECP's main power button. This button also functions as your status warning light.

Ready Light	Status
Off	The projector isn't receiving power. Check your power cable, RS-232 connector at the projector (located below the power cable) and power supply. If nothing changes after checking your power cable, RS-232 connector and power supply, call your authorized SMART reseller .
Solid amber	The projector is receiving power but is turned off.
Flashing green	The projector is receiving power and is starting up.
Solid green	The projector is on and the ECP is receiving power and communicating with the projector.
Flashing amber	The interactive whiteboard system is about to enter Idle mode.

Projector Ready Lights and Projector Status

The UF55 projector's two indicator LED lights (Power and Temperature) are located on the boom-mounted projector. Specific light sequences convey information about the state of your projector, including warning messages and issues. The following table describes projector warning messages and issues.

IMPORTANT 	After you resolve your projector's issue, you must disconnect and then connect your projector power cable, clear the indicator light sequence and reset your projector's status.
---	--

Message	Power LED (Green/Amber)	Temperature LED (Red)
Idle mode	Solid amber	Off
Powering	Flashing green	Off
On (Lamp On)	Solid green	Off
Cooling	Flashing amber	Off
Error (Temperature Exceeded)	Off	Flashing red
Error (Fan Failure)	Off	Solid red
Error (Color Wheel Failure)	Off	Solid red
Error (Lamp Failure)	Solid amber	Flashing red

Errors

Temperature Exceeded

If the Temperature Exceeded indicator message appears, and your projector turns off during use, one of the following issues is occurring:

- Your projector has overheated internally. The projector can overheat due to a blocked air intake or exhaustor and ambient temperature over 55°C.
- The temperature outside your projector is too high.

To resolve the Temperature Exceeded error

1. Wait 15 minutes for the projector to cool down before attempting to restart.
2. Make sure that nothing is blocking the air intake and exhaust.
3. Disconnect the power cable from the power outlet.
4. Reconnect the power cable.
5. If the previous steps don't resolve the issue and your projector still doesn't turn on, disconnect the power cable, and then contact your [authorized SMART reseller](#).

Fan Failure

If the Fan Failure indicator message appears and your projector turns off during use, one of the following issues is occurring:

- One of the fans has failed.
- Your projector is overheating internally.

To resolve your Fan Failure error

Disconnect the power cable and then contact your [authorized SMART reseller](#).

Color Wheel Failure

If the Color Wheel Failure error message appears, and your projector turns off during use, your projector has an internal problem.

To resolve the Color Wheel Failure error

1. Disconnect the power cable.
2. Connect the power cable.
3. If the previous steps don't resolve the issue, disconnect the power cable, and then contact your [authorized SMART reseller](#).

Lamp Failure

If the Lamp Failure indicator message appears and the lamp turns off during use or won't turn on, one of the following issues is occurring:

- Your lamp over-heated (the lamp can overheat due to a blocked air intake or exhaustor).
- The lamp temperature is too high.
- You need a new lamp because the lamp has reached the end of its life.
- Your projector has an internal problem.

To resolve your Lamp Failure error

1. Disconnect the power cable.
2. Connect the power cable.
3. If the previous steps don't resolve the issue, the lamp might be at the end of its life. See pages 47 to 56 or go to the [SMART Support website](#) for more information.
4. If your projector still doesn't turn on, disconnect the power cable, and then contact your [authorized SMART reseller](#).

Ready Light Isn't Lit

If your Ready light isn't lit, one of the following issues is occurring:

- There is a power outage or a power surge.
- A circuit breaker or a safety switch was tripped.
- Your projector isn't connected to a power source.
- Your projector has an internal problem.

To resolve your unlit Ready light issue

1. Check the power source, and then make sure that all cables are connected.
2. Confirm that your projector is connected to an active power outlet.
3. Check that the pins on the connectors aren't broken or bent.
4. Make sure the **Hide Display** feature on the remote control is disabled.
5. If the previous steps don't resolve the issue, disconnect the power cable and then contact your [authorized SMART reseller](#).

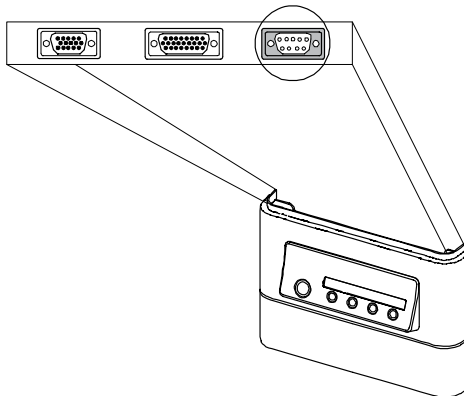
Appendix A: Remotely Managing Your Interactive Whiteboard System

This appendix provides detailed instructions on how to set up your computer or your room control system to manage your SMART Board interactive whiteboard system settings.

- Programming Commands for Your SMART Board Interactive Whiteboard System Settings (this page)
 - Pin Configuration on the ECP RS-232 Connector (page 36)
 - Serial Interface Settings (page 36)
 - UF55 Projector Powerstates (page 37)
- Command Inventory (page 38)
 - Powerstate Control (page 40)
 - Source Selection (page 41)
 - Video Control (page 42)
 - Audio Control (page 43)
 - Network Information (page 43)
 - System Information (page 45)

Programming Commands for Your SMART Board Interactive Whiteboard System Settings

You can externally manage projector settings by connecting a computer or room control system to the serial interface (RS-232) on the ECP for the UF55 projector. Using a computer connection or room control system, you can select video inputs, start up or shut down the interactive whiteboard and request information such as projector lamp usage, current settings and network addresses.



Pin Configuration on the ECP RS-232 Connector

The following table provides the pin configuration on the ECP. This configuration follows a three-wire connection, so that a straight-through male to female RS-232 serial cable connects to the ECP serial interface in the following arrangement.

Pin Number	Female UF55 Projector ECP RS-232 Connector
2	Transmit
3	Receive
5	Signal Ground

Serial Interface Settings

The UF55 projector's serial interface settings are not configurable. You must configure your computer's serial communication program (such as Microsoft® HyperTerminal) or your room control system's serial communication settings with the following values:

Criteria	Input Value
Data Rate	19,200 bps
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

NOTES

- All commands should be entered in ASCII format. Terminate all commands with a carriage return.
- All responses from the ECP are terminated with a carriage return line feed combination followed by a command prompt. Wait until you receive the command prompt indicating that the system is ready for another command before proceeding.

To configure your serial interface

CAUTION



Do not connect your serial cable directly to the projector's RS-232 serial interface. The ECP's RS-232 serial interface is the only recommended connection point.

1. Turn on your computer, and then start your serial communications program or terminal emulation program.
2. Connect your computer to the ECP's serial connector using a DB9 cable.
3. Configure your serial interface settings using the values in the table in the previous section, and then press ENTER.

An "invalid cmd= ? for help" message appears, and the > character appears as a command prompt on the following line.

NOTE: If no message or an error message appears, your serial interface configuration is incorrect. Return to step 3 to reset your serial interface settings.

4. Type commands to configure your settings.

NOTES

- To see a list of available commands, type ? and then press ENTER.
- When you use a terminal emulation program, turn on your program's local echo setting if you want to see characters as you type them.

UF55 Projector Powerstates

The UF55 projector responds to commands only at certain power levels and times. There are four projector powerstates:

- Idle
- Powering (startup)
- On (operating)
- Cooling (idle)

The embedded firmware program coordinates command sequencing and is capable of buffering up to 127 commands. In each powerstate, the commands are buffered until the system can process them. The ? command will list all available commands for the current powerstate.

IMPORTANT



The system buffer can delay response times. Response times vary.

Command Inventory

The UF55 projector responds to the commands in the tables on the following pages.

NOTES

- Commands aren't case sensitive.
- Type commands exactly as they appear in the left column of the tables.
- Press ENTER after typing each command.

CAUTION

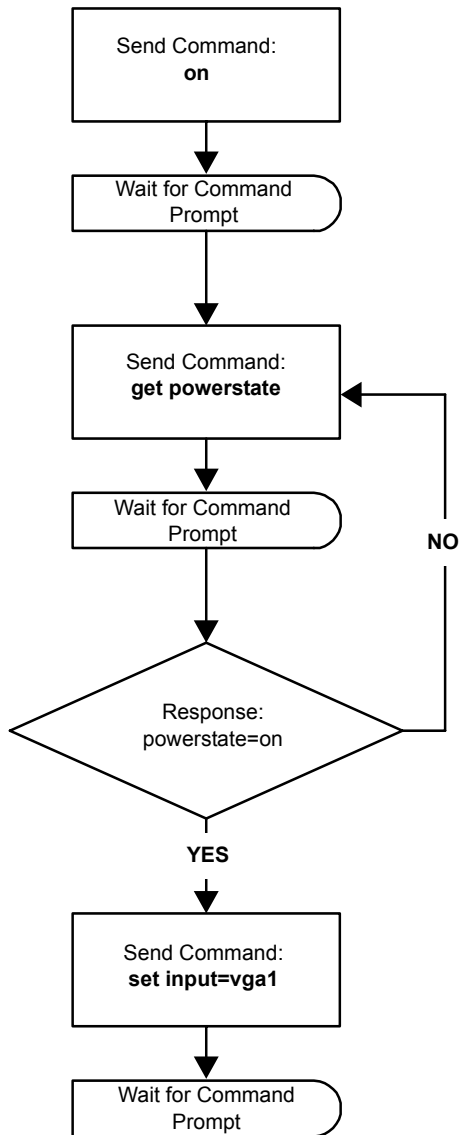


- Cycling power to the projector repeatedly can lock or damage the interactive whiteboard system. Allow at least 15 minutes for cooling before sending the **on** command after turning off the system.
- Check your entries carefully before entering your commands.

- After the projector executes a command, it generates a response. There are two ways to program the command sequence to turn on the system, wait for the powering cycle to finish and select an input source:
 - Allow the ECP to sequence the commands
 - Control the sequence programmatically

To allow the ECP to sequence commands

1. Type **on**, and then press ENTER.
2. Type **set input=vga1**, and then press ENTER.



Powerstate Control

Allows the projector to turn on or off and switch between other related controls.

Command	Response	Powered Off
on	powerstate=[powerstate]	yes
off [off option]	powerstate=[powerstate]	yes
get powerstate	powerstate=[powerstate]	yes

NOTE: You must send the **off** command twice. The first command displays an on-screen message, and the second command shuts off the system. You must send the second command within 10 seconds of the first, or the first command times out.

Field	Possible Values	Description
off option	Now	This is an optional field, which when specified shuts down the projector immediately. If Now isn't specified, a dialog box appears with the message, "Press Power Button to Turn off Projector." A second off command must be sent within 10 seconds to completely turn off the projector or else the projector doesn't turn off.
powerstate	Powering On Cooling Confirm Off Idle	This indicates the projector's current powerstate. NOTE: Confirm Off, as listed under the Possible Value list in the table, is a non-selectable powerstate that is returned during stage one of the two button off sequence.

Source Selection

Allows you to switch between input sources.

Command	Response	Powered Off
set input [target]	input=[current]	no
get input [current]	input=[current]	yes

Field	Possible Values	Description
target input	=VGA1 =VGA2 =Composite =S-Video	Allows you to select which application you would like to switch to
current input	VGA1 VGA2 Composite S-Video None	Indicates the current input selected NOTE: The None value is a non-selectable value that appears when you enter a 'get input' command while the projector is in idle mode.

Video Control

Allows you to switch between Video output controls.

Command	Response	Powered Off
set brightness [target]	brightness=[current]	no
get brightness	brightness=[current]	no
set contrast [target]	contrast=[current]	no
get contrast	contrast=[current]	no

Field	Possible Values	Description
target brightness	+val -val =0 to 100	If you specify a + or - before the value, it adds or subtracts it from the current value. If you indicate a specific numerical value, it sets the brightness directly to the number.
current brightness	0 to 100	Indicates the current brightness
target contrast	+val -val =0 to 100	If you specify a + or - before the value, it adds or subtracts it from the current value. If you indicate a specific numerical value, it sets the contrast directly to the number.
current contrast	0 to 100	Indicates the current contrast

Audio Control

Allows you to switch between audio output controls. This value range should match the range displayed on the on-screen display.

Command	Response	Powered Off
set volume [target]	volume=[current]	no
get volume	volume=[current]	no

Field	Possible Values	Description
target volume	+val -val =-20 to 20	If you specify a + or - before the value, it adds or subtracts it from the current value. If you indicate a specific numerical value, it sets the volume directly to the number.
current volume	-20 to 20	Indicates the current volume selected

Network Information

Allows you to switch network information.

Command	Response	Powered off
get netstatus	netstatus=[current]	yes
set dhcp	dhcp=[current]	yes
get dhcp	dhcp=[current]	yes
set ipaddr	ipaddr=[current]	yes
get ipaddr	ipaddr=[current]	yes
set subnetmask	subnetmask=[current]	yes
get subnetmask	subnetmask=[current]	yes
set gateway	gateway=[current]	yes
get gateway	gateway=[current]	yes
set primarydns	primarydns=[current]	yes
get primarydns	primarydns=[current]	yes
get macaddr	macaddr=[current]	yes

(Continued on next page)

Field	Possible Values	Description
current netstatus	connected disconnected	Displays the current state of the network interface
current dhcp	on off	Displays whether the DHCP networking is enabled or disabled
target dhcp	=on =off	Displays whether the DHCP networking is enabled or disabled
current ipaddr	x.x.x.x	Displays the current IP address
target ipaddr	x.x.x.x	Displays the target IP address (only if dhcp=off)
current subnetmask	x.x.x x	Displays the current subnet mask
target subnetmask	x.x.x.x	Displays the target subnet mask
current gateway	x.x.x.x	Displays the current gateway
target gateway	x.x.x.x	Displays the target gateway
current primarydns	x.x.x.x	Displays the current primary DNS
target primarydns	x.x.x.x	Displays the target primary DNS
MAC address	x-x-x-x-x-x	Displays the device's MAC address

System Information

Allows you to switch system information.

Command	Response	Powered off
get projectorid	projectorid=[current]	no
get serialnum	serialnum=[current]	yes
get lamphrs	lamphrs=[current]	yes
get syshrs	syshrs=[current]	yes
get fwverddp	fwverddp=[current]	yes
get fwvernet	fwvernet=[current]	yes
get fwvermpu	fwvermpu=[current]	yes
get fwver	fwver=[current]	yes
get bootver	bootver=[current]	yes

Field	Possible Values	Description
current projectorid	0 to 99	Displays the projector's assigned ID number
current serialnum	xxxxxxxxxxxx	Displays the projector's serial number
current lamphrs	0 to 5000	Displays the current lamp hour usage
current syshrs	0 to 5000	Displays the current system hour usage
current fwverddp	x.x.x.x	Displays the projector's DDP version
current fwvernet	x.x.x.x	Displays the projector's network firmware version
current fwvermpu	x.x.x.x	Displays the MPU version
current fwver	x.x.x.x	Displays the ECP application version
current bootver	x.x.x.x	Displays the bootloader version

Appendix B: Replacing Your UF55 Projector Lamp

This appendix has detailed instructions on how to replace your projector lamp. Topics include the following:

- Replacing the Projector Lamp (this page)
 - Removing the Projector from the Boom (page 49)
 - Replacing the Projector Lamp Module (page 52)
 - Re-attaching the Projector (page 54)
 - Resetting the Lamp Timer (page 57)

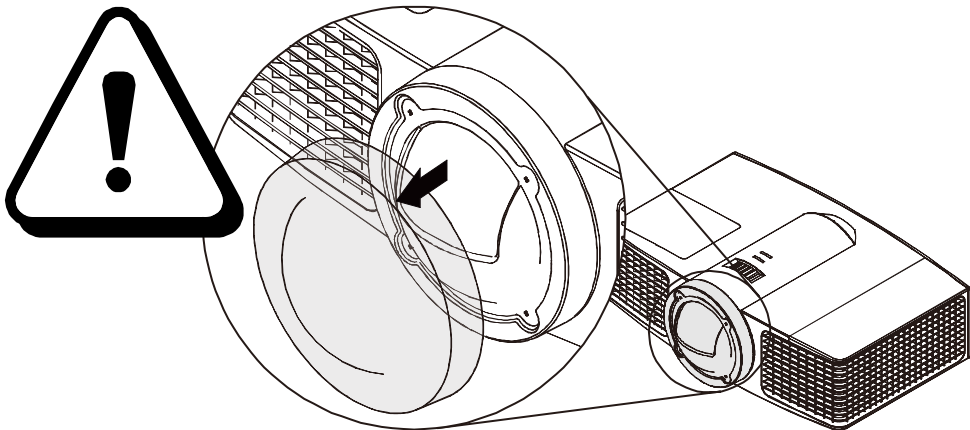
Replacing the Projector Lamp

If a lamp fails, or if a replacement message appears on the screen of the UF55 projector, a qualified person can replace the projector lamp. Don't access the service panel without a replacement lamp and instructions in hand.

WARNING

Do not attempt to service the projector other than performing routine lamp replacement. Service should be performed only by an authorized service provider. Other than the lamp module, there are no user-serviceable parts inside the unit.

NOTE: Ensure that you remove the plastic lens cover from the projector.



WARNING

- If the lamp has shattered or burst, call an [authorized SMART reseller](#) for instructions. Do not attempt to replace the lamp. Do not touch the glass fragments because they might cause injury. Leave and then ventilate the area where the lamp shattered or burst. Wash your hands thoroughly if you have come into contact with lamp debris. Thoroughly clean the area around the projector, and discard any edible items placed in that area because they may be contaminated.
- The lamp used in the UF55 projector contains mercury. Recycle or dispose of it as hazardous waste, in accordance with local regulations.
- Use only replacement lamps approved by SMART Technologies. Contact your [authorized SMART reseller](#) for replacement parts.
- Turn off the projector and wait 30 minutes for the lamp to cool completely before removing the old lamp assembly.
- Never replace the lamp assembly with a previously used lamp assembly.
- Do not open or disassemble the projector as this may cause electric shock.
- Avoid turning off the projector during the lamp ignition phase as this may lead to premature lamp failure. Before turning the projector off, keep the lamp on for a minimum of 15 minutes after turning it on to preserve the lamp life.
- This projector detects its own remaining lamp life. Replace the lamp when lamp life warning messages appears.
- If you continue to use the projector after the replacement message appears, the lamp might shatter or burst, scattering glass throughout the projector head. When the lamp is approaching the end of its life, the message “Lamp is approaching the end of its useful life in full power operation” appears on the screen. Contact your [authorized SMART reseller](#) or service center to change the lamp as soon as possible.
- Remove the projector from the projector’s arm before servicing the lamp. Complete the procedure described in this document before following the instructions included in your replacement lamp box.
- Replacing the lamp in a boom-mounted projector might result in a fall or injury.
- Uncovering the lamp while the projector is mounted on a projector’s arm might lead to product damage or personal injury from falling pieces of glass if the lamp is broken.
- Wear protective eyewear while changing the lamp. Failure to do so can cause injury or loss of eyesight if the lamp shatters or bursts.
- To prevent premature lamp failure or exposure to mercury, always handle the fragile lamp assembly with care. Use gloves when touching the lamp. Do not touch the lamp with your fingers.
- Cleaning a boom-mounted projector may result in a fall or injury.

Removing the Projector from the Boom

Before you can replace the projector lamp, you must remove the projector from the boom.

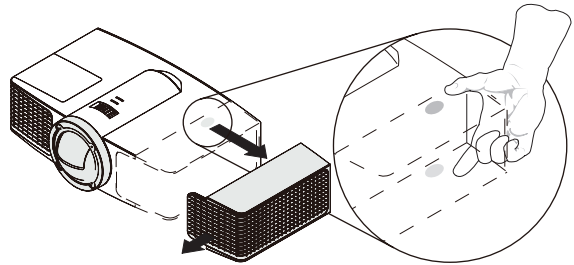
WARNING



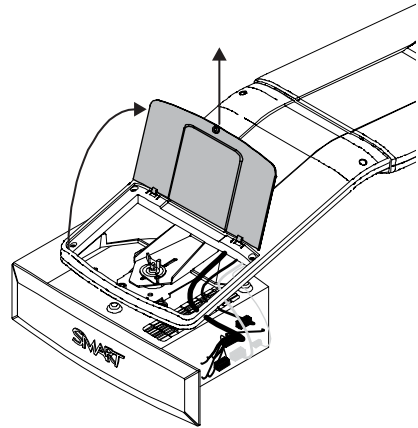
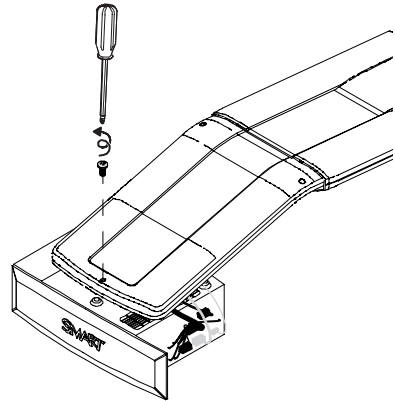
Two people are required to remove the projector.

To remove the projector from the boom

1. Wait for the projector to cool by allowing the fan to completely shut down. Disconnect the power cable at the projector to shut down the lamp. Disconnect the power cable from the power outlet.
2. Disconnect all remaining connected cables. Pull the cable cover forward and leftward to remove the cable cover from the slot.

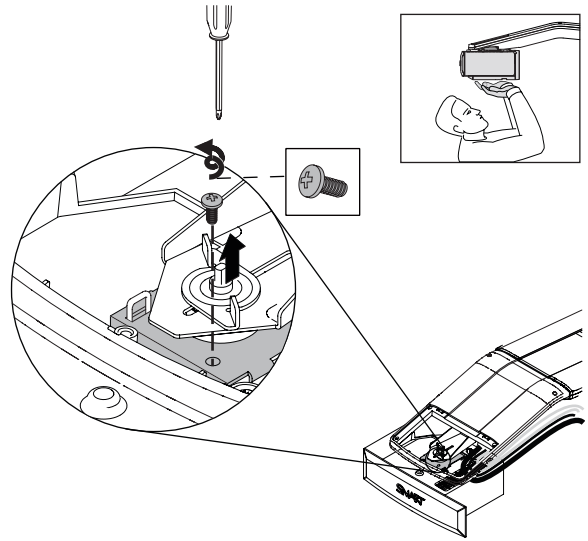


3. While firmly holding the projector with your hand, and without putting pressure or weight on the projector boom, remove the one screw holding the cover in place. Put the screw in a safe place. Remove the cover on the top of the boom.

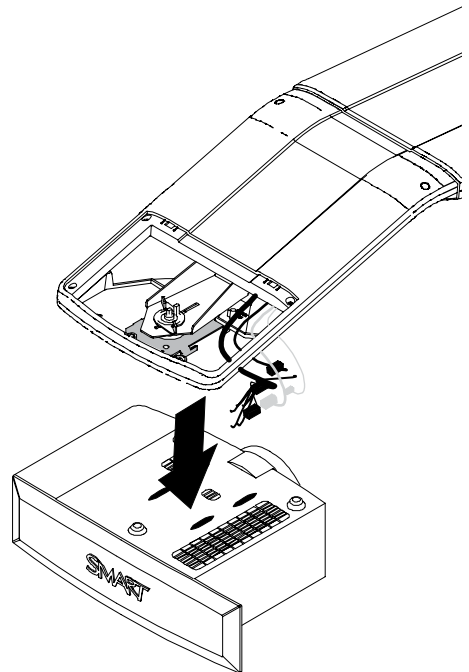


4. If you use a projector padlock, make sure that you remove it from the locking loop. If you need access to your projector locking screw, loosen the wingnut, slide the projector all the way back away from the interactive whiteboard's screen, and then tighten the wingnut.

5. Remove the one screw on the bracket with a Phillips® No. 2 screwdriver. The projector may drop freely if it is moved around with the screw not in place. Use two hands when removing the projector from the boom. Put the screw in a safe place.




6. Carefully unhook the projector from the hooks on the projector boom. Lay the projector flat on your work area so that the warning lights face upward.

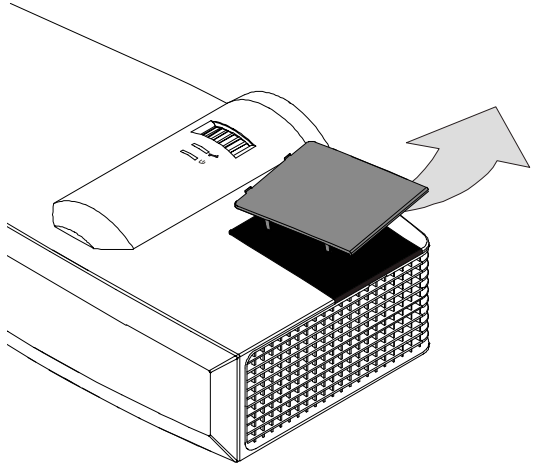


Replacing the Projector Lamp Module

After you remove the lamp from the projector, follow these instructions to replace the lamp.

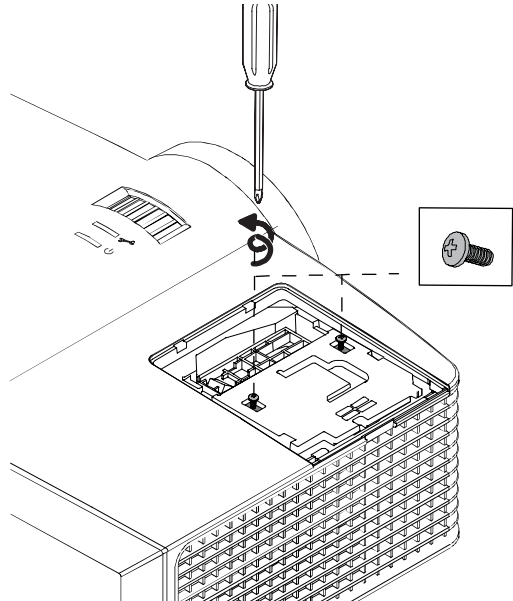
To remove the old lamp

1. Turn off the projector by pressing the power  button located on the remote control. Make sure that the fan is completely off and then disconnect the power cable.
2. Wait at least 30 minutes for the projector to completely cool down.
3. Pull up the outer lamp cover using your finger.
4. Remove the outer lamp cover and keep it in a safe place.

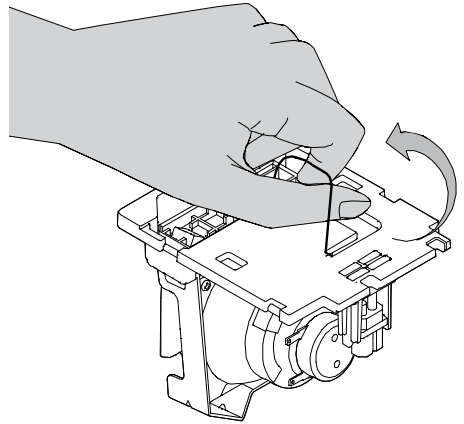


To insert the new lamp

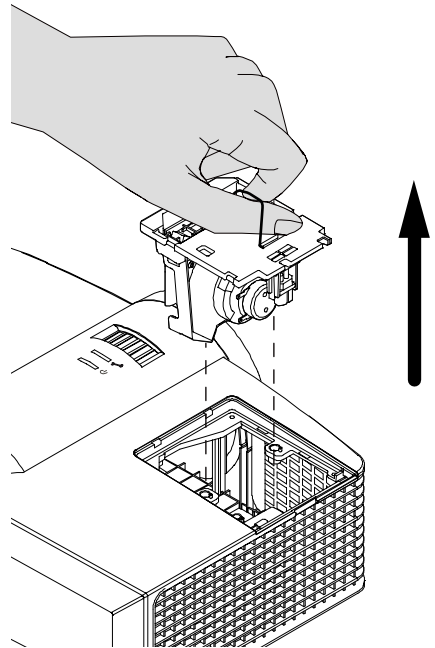
1. Loosen the two screws on the inner lamp module with a Phillips No. 2 screwdriver. The screws release from the projector but not from the lamp module.
2. Allow sufficient time for the lamp and inner lamp cover to cool. They should feel cool enough to touch and to work with easily.



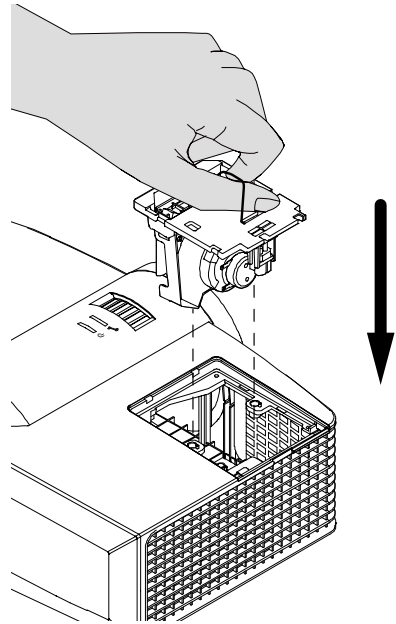
3. Pull up on the handle of the old lamp. Don't touch any part of the lamp except the housing.



4. Remove the old lamp. Recycle or dispose of the old lamp according to your local waste authority.
5. Remove the new lamp from all of its packaging.
6. Put the new lamp into the lamp slot, and push it all the way down. Tighten the lamp locking screws until the new lamp is secure.



7. Put the outer lamp cover back into its original position.



Re-attaching the Projector

WARNING

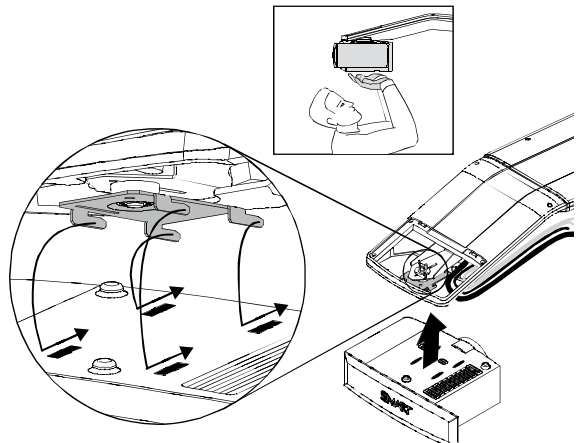


Two people are required to mount the projector.

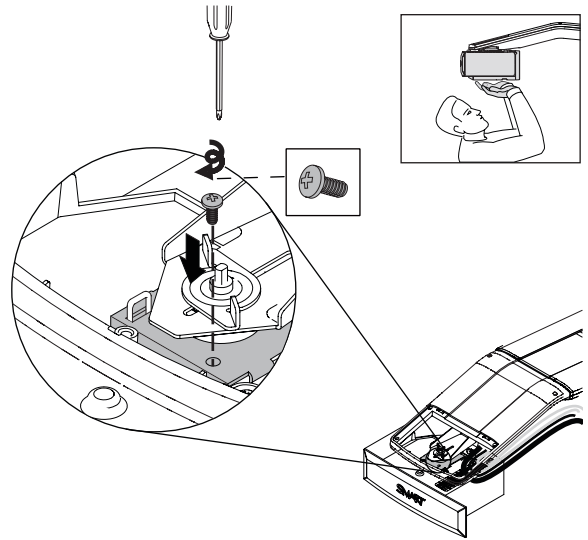
To re-attach the projector to the boom

1. Align the hooks on the boom with the slots on the projector, and then slide the projector into place.

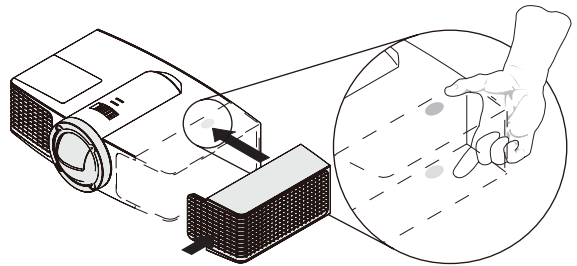
NOTE: Hold the projector firmly when re-attaching it. The projector is the only part moving. The boom stays stationary.



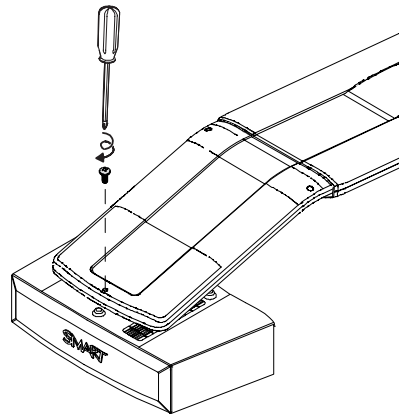
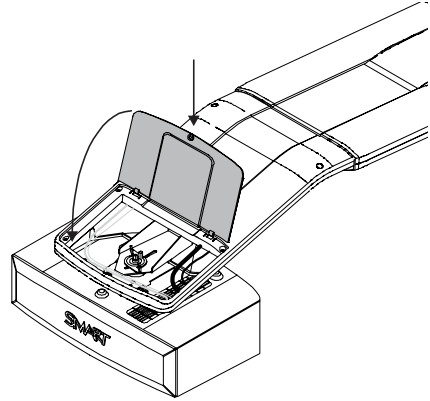
2. Retrieve the projector plate screw that you removed when you took the projector off the boom. Secure the projector to the plate with the screw.
3. Re-attach your projector padlock (optional).



4. Connect all cables to the projector and then attach the cable cover.
5. Connect the power cable to the wall power outlet. Wait for the projector to turn on completely.










6. To re-adjust your image, see pages 9 to 13. Attach the cover on the top of the boom. Tighten the screw until it is secure, without putting pressure or weight on the projector boom.



Resetting the Lamp Timer

After you replace the lamp, reset the lamp timer.

To reset the lamp timer

1. Press the power button on the ECP or the remote control  to start the system. The ECP's power light turns solid green when the system starts.
2. To confirm that the lamp timer has been reset, access the service menu by pressing DOWN , UP , UP , LEFT , UP  on the remote control. Select  on the lamp. Select **Lamp Hour Reset > Yes**. Your lamp reset count increases by one.
3. Wait five minutes for the projector lamp to warm up.
4. Put the system into Idle mode by pressing the power button twice on the ECP or remote control. The power button light on the ECP turns solid amber when the system is in Idle mode.
NOTE: The lamp may take up to 15 minutes to re-strike.
5. When you are ready to use the system, press the power button on the ECP to start the system.

Hardware Environmental Compliance

SMART Technologies supports global efforts to ensure that electronic equipment is manufactured, sold and disposed of in a safe and environmentally friendly manner.

Waste Electrical and Electronic Equipment Regulations (WEEE Directive)

Waste Electrical and Electronic Equipment regulations apply to all electrical and electronic equipment sold within the European Union.

When you dispose of any electrical or electronic equipment, including SMART Technologies products, we strongly encourage you to properly recycle the electronic product when it has reached end of its life. If you require further information, please contact your reseller or SMART Technologies for information on which recycling agency to contact.



Restriction of Certain Chemicals (REACH Directive)

The European Union has enacted the EU REACH Directive which restricts the use of certain chemicals in products. SMART Technologies is committed to complying with this initiative.

Restriction of Certain Hazardous Substances (RoHS) Directives

This product meets the requirements of the European Union's Restriction of Certain Hazardous Substances (RoHS) Directive 2002/95/EC.

Consequently, this product also complies with other regulations that have arisen in various geographical areas, and that reference the European Union's RoHS directive.

Batteries

Batteries are regulated in many countries. Check with your reseller to find out how to recycle used batteries.

Packaging

Many countries have regulations restricting the use of certain heavy metals in product packaging. The packaging used by SMART Technologies to ship products complies with applicable packaging laws.

China's Electronic Information Products Regulations

China regulates products that are classified as EIP (Electronic Information Products). SMART Technologies products fall under this classification and meet the requirements for China's EIP regulations.

U.S. Consumer Product Safety Improvement Act

The United States has enacted the *Consumer Product Safety Improvement Act* which limits the lead (Pb) content in products. SMART Technologies is committed to complying with this initiative.

Customer Support

Online Information and Support

Visit www.smarttech.com/support to view and download user's guides, how-to and troubleshooting articles, software and more.

Training

Visit www.smarttech.com/trainingcenter for training materials and information about our training services.

Technical Support

If you experience difficulty with your SMART product, please contact your local reseller before contacting SMART Technical Support. Your local reseller can resolve most issues without delay.

NOTE: To locate your local reseller, visit www2.smarttech.com/st/en-US/Where+to+Buy.

All SMART products include online, telephone, fax and e-mail support:

Online: www.smarttech.com/contactsupport

Telephone: +1.403.228.5940 or

Toll Free 1.866.518.6791 (U.S./Canada)

(Monday to Friday, 5 a.m. – 6 p.m. Mountain Time)

Fax: +1.403.806.1256

E-mail: support@smarttech.com

Shipping and Repair Status

Contact SMART's Return of Merchandise Authorization (RMA) group, Option 5, +1.866.518.6791, for shipping damage, missing part and repair status issues.

General Inquiries

Address: SMART Technologies

3636 Research Road NW

Calgary, AB T2L 1Y1

CANADA

Switchboard: +1.403.245.0333 or

Toll Free 1.888.42.SMART (U.S./Canada)

Fax: +1.403.228.2500

E-mail: info@smarttech.com

Registration

To help us serve you, register online at www.smarttech.com/registration.

Warranty

Product warranty is governed by the terms and conditions of SMART's "Limited Equipment Warranty" that shipped with the SMART product at the time of purchase.

Index

A

Adjusting

Default settings

Auto input search, 26

Keystone, 26

Image adjustment options, 27

Brightness, 25

Contrast, 25

Keystone alignment, 8

Position adjustment options

Frequency, 25

Horizontal position, 25

Vertical position, 25

Projector settings, 27

Automatically switching source inputs, 26

B

Batteries, 59

Before installing your system

Environmental requirements, 6

Location, 7

C

Cables

Harness cable (ECP), 3

Cautions

Dust, 6

Electrostatic discharge, 6

Environment, 6

Humidity, 6

Water and fluid resistance, 6

China's Electronic Information, 60

Cleaning

Mirror, 29

Your UF55 projector, 29

Connecting

Connecting a host computer to the ECP, 15, 20

Digital and document cameras, 21

DVD players and VCR's, 21

Peripheral visual or audio-visual devices, 21

E

Environmental requirements

Cautions, 6

Dust and scratching, 6

Electrostatic discharge, 6

Humidity, 6

Water and fluid resistance, 6

Wave interference, 7

Extended control panel (ECP)

About, 3

Connecting a host computer, 15, 20

Connecting peripheral audio-visual devices, 21

I

Installing

Adjusting keystone alignment, 8

Environmental requirements, 6

Notebook software, 15

K

Keystone

Definition, 8

Adjusting Vertical, 8

Adjusting Horizontal, 8

L

Lamp replacement, 47

M

Maintaining, 47

Menu, 27

Mirror cleaning, 29

N

Notebook software, 15

P

Packaging, 59

R

- REACH directive, 59
- Registration, 61
- Remote control menu, 27
- Removing the projector plate assembly, 47, 49
- Replacing the projector lamp, 47
- Resetting the lamp timer, 56
- RoHS directives, 59

S

- SMART Board interactive whiteboard system
 - About, 1
 - Before installing, 7
 - Connecting your computers, 19
 - Features, 2
 - Maintaining, 47
 - Recommended mounting height, 5, 7
 - Standard accessories, 3
- Starting up your system, 23
- System warning lights, 31

T

- Troubleshooting
 - Warning lights, 31
- Turning on your system, 23

U

- U.S. Consumer Product Safety, 60
- UF55 projector
 - Adjusting settings, 27
 - Cleaning, 29
 - Remote control, 3, 24
 - Removing the projector plate assembly, 47
 - Replacing the lamp, 47
 - Resetting the lamp timer, 56
 - Using, 24
 - Won't turn on, 31
- UF55 projector
 - Removing the projector plate assembly, 49
- Using
 - Adjusting your UF55 projector settings, 27
 - Image adjustment options, 27
 - Selecting an input, 23
 - Starting up your SMART Board interactive whiteboard system, 23

- Using the remote control, 24
- Using your UF55 projector, 24

W

- Warning lights, 31
- Warranty, 62
- Wave interference, 7
- WEEE directive, 59



SMART Technologies

3636 Research Road NW

Calgary, AB T2L 1Y1

CANADA

www.smarttech.com/support

www.smarttech.com/contactsupport

Support +1.403.228.5940

Toll Free 1.866.518.6791 (U.S./Canada)

99-00964-20 REV A0