

Driver Kit:

CornerKlick™ Driver Instructions



CornerKlick™ Driver Kit		
	The CornerKlick driver software calculates the keystone correction based on the four corners of the screen identified by the user.	
Applicable ImageProcessors:		Applicable SDK Releases:
PW463, PW465		ySDK 3.1.a_P01thruP12

Introduction

CornerKlick™ digital keystone correction eliminates the trial-and-error of aiming the projector at the screen and manually “squaring up” the image displayed. Users simply identify the four corners of the projection screen using a remote control, then Pixelworks’s system-on-a-chip software and electronics renders a perfectly squared projected image that snaps into place.

This latest advancement in digital keystone correction gives users greater flexibility in placing projectors in a room. By taking the guesswork out of set up, projectors become easier to use.

The CornerKlick feature is now available on Pixelworks’s latest generation of system-on-a-chip ICs for the digital projector industry.

Contents of Kit

This kit contains one (1) CD-ROM with the following files:

- Software: pw_ySDK-CornerKlick3.1a.exe
- Documentation
 - Driver Kit Instructions
 - Release Notes



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Install Software Driver

NOTE

Prior to installation, these three steps must be completed:

1. Install the ySDK3.1.a base SDK release.
2. Unzip patches ySDK3.1.a_P01thruP12 over the base release.
3. Run Delete Files_YSDK.BAT from the root folder.

To install the software driver:

1. Insert CD-ROM into drive.
2. Follow the instructions in the Installation Wizard.

If Auto-run does not start:

1. Open Windows Explorer and view the CD-ROM contents.
2. Double-click the pw_ySDK_CornerKlick_3.1a.exe file.
3. Follow the prompts.

After the driver is installed, now flash the chip.

1. Run the PWConfig.exe file and select the Eval465_05_CK.pwc file.

NOTE

Optional: Select 2-Config Pages from the list on the left and select a different output display.

2. Select **Export All** from the File menu to build the config.hex file.
3. Close PWConfig.exe.
4. Run GUIBuilder.exe and open the YAM_CornerKlick.gui file.
5. Click the **Generate** button to build the gui.hex file.
6. Close GUIBuilder.exe.
7. Open Paradigm by double-clicking the pwsdk_1m.ide file located in the ..\ySDK\embedded\ folder of the root directory.
8. Right-click on the romcode.axe file and select **Target Expert**.
9. Set the Target Connection field to **No Target/ROM**.
10. Right-click on the romcode.axe file and build node.
11. Repeat steps 8-10 for the bootcode.ide and flasher.ide files.
12. Close Paradigm.
13. Run FlashUpgrader.exe and select bootcode.inf from the drop down box of the Flash File field.
14. Click the **Flash** button.
15. Make sure the serial cable is plugged in to the board, then push the hardware reset button on the board.
16. Repeat steps 13 and 14 for the pwSDK.inf file.

NOTE

Only one copy of FlashUpgrader.exe can be open at a time because this application captures data from the serial port.

17. Cycle power to the board by removing and replacing the power cord. Perform a reset by simultaneously pressing the three buttons on the keypad closest to the ribbon cable (see Figure 1), then cycle power again.

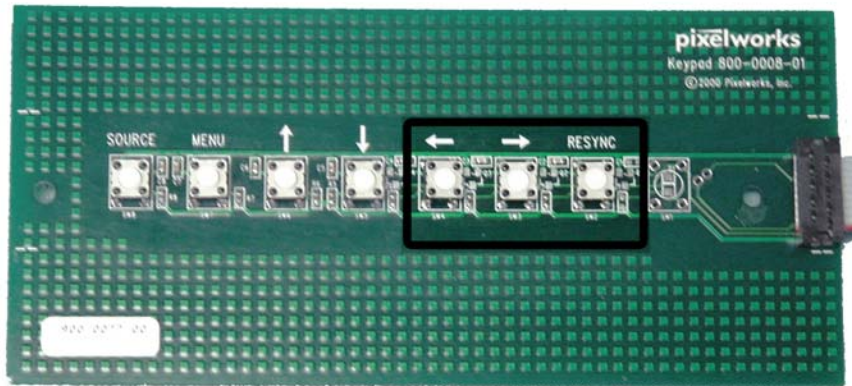


Figure 1. Keypad Buttons

Perform Keystone Corrections

After successfully installing the driver and flashing the chip, make the keystone correction.

1. Push the **F2** button on the remote to display the test pattern screen. The initial projection should be larger than the desired screen area (as shown in Figure 2).

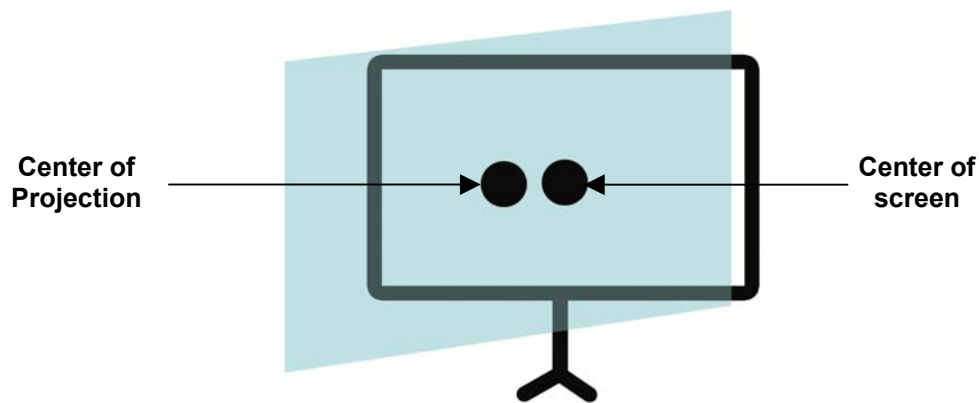


Figure 2. Initial Projection

2. Position the projector so the center of the test pattern is over the center of the screen (as shown in Figure 3).

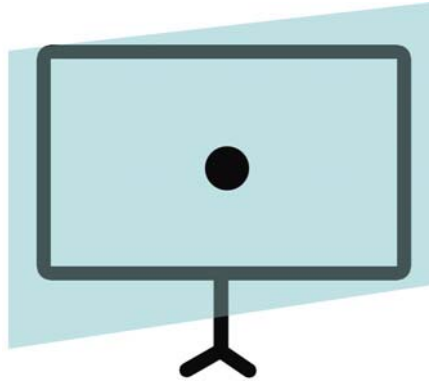


Figure 3. Projection Centered on Screen

NOTE

To maximize the screen, also try matching one corner of the projected image to one corner of the screen.

3. Move the cursor to the top left corner of the screen using the **arrow** buttons on the remote control.
4. Press the right arrow (>) **Menu** button on the remote control.
5. Repeat Steps 3 and 4 for the remaining three corners. Move in a clockwise direction around the screen (as shown in Figure 4).

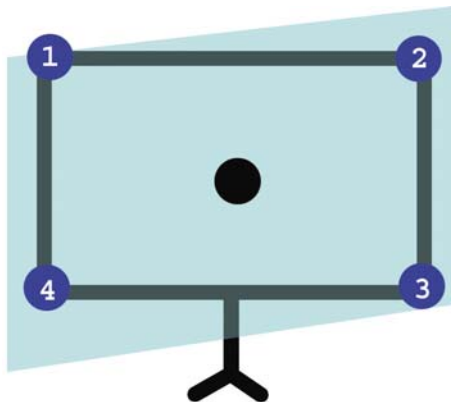


Figure 4. Four Corners Identified

- When all four corners are identified, press **OK** and the CornerKlick driver corrects the projected image (as shown in Figure 5).

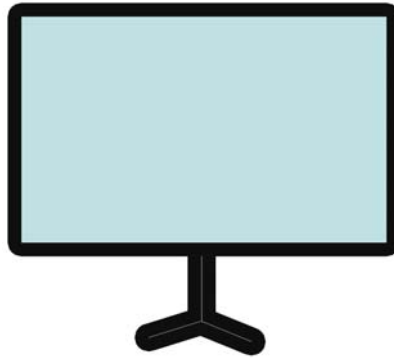


Figure 5. Corrected Projection

Tips

Here are some additional factors that optimize the CornerKlick digital keystone correction feature:

- CornerKlick's semi-auto mode works best under the following conditions:
 - Optical data must be correct.
 - Projection points must be near the center of the mechanical rotation.
 - The projector should have a stable base rather than adjustable legs.
- The shrink function reduces the keystone range and lowers accuracy due to bandwidth issues. Define `_NO_SHRINK_` in the `pwConfig.ini` file.
- The SDK standard bandwidth calculation has a safety range. This range is determined by the mechanical rotation angle of a projector. Keystone corrections made outside of this range result in an "out-of-boundary" error. To maximize the keystone range, calculate your own keystone bandwidth based on the measurements of your product.

Revision History

Revision	Date	Description
016-0044-00 Rev A	July 2003	Initial release.

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