

## Title: **KODAK CAROUSEL/EKTAGRAPHIC Projectors: Troubleshooting**

Projector Does Not Operate  
Slide Fails To Drop Into Projection  
Dark Screen Shutter  
Projector Will Not Cycle To Next  
Projector Cycles Continuously  
Uneven Illumination on Screen  
Uneven Image Size or Proportion  
No Illumination in Projector  
Image Angle Is Distorted  
Movement of Strange Shapes on  
Early or Repeated Lamp Burnout  
Focus Trouble Shooting

### **CAROUSEL/EKTAGRAPHIC Troubleshooting : Projector Does Not Operate**

<b>Probable Cause</b>	<b>Possible Solutions</b>
No power to projector	Plug power cord into suitable electrical outlet; Set power switch to
Shutdown from overheating due to improper ventilation (rear air flow	Have serviced

### **Slide Fails To Drop**

<b>Probable Causes</b>	<b>Possible Solutions</b>
Tray base plate not properly	Align index hole & index notch  see Trouble Shooting Trays for how to align bottom plate
Tray not properly positioned on	Reposition tray on projector
Slide mount warped or frayed at	Straighten mount or remount slide
Projector not level or tilted too high	Set projector on a stand equal with center of screen

### **Projector Not Cycling**

<b>Probable Causes</b>	<b>Possible Solutions</b>
Tray not properly positioned	Reposition tray
Slide or foreign object stuck in gate	See Tray Troubleshooting for finding a tray jam

Cycle cam, index and/or select lever not functioning * * Remove tray, press Forward button; should be 3 levers moving	
Elevated too high; should not	Reduce elevation

## Projector Cycles Continuously

Probable Causes	Possible Solutions
Voltage irregularity (unplug remote if connected)	Use surge suppressor Power strip outlet with fuse
Timer engaged (on featured)	Turn off timer
If no results, may be a bent or damaged lever in linkage	Have serviced
Hot relay in receiver when connected with an IR Remote	Remove IR Remote Receiver and replace with wire remote or operate
IR signal may be susceptible to high intensity interference (e.g.,	Turn off fluorescent lighting

## Uneven Illumination on Screen

Probable Causes	Possible Solutions
Projection lamp not fully seated	Check lamp
Condenser lens not installed or not positioned properly in mount	Check condenser lens
Slide mount not seated properly in projector gate	Check slide position & slide-mount condition
Shutter hanging partially	Have serviced

## Uneven Image Size/Proportion

Probable Causes	Possible Solutions
Gate may be damaged or out of	Have serviced
Key stoning may be occurring	Projector should be positioned perpendicularly at a 90° angle to

## No Illumination in Projector

Probable Causes	Possible Solutions
Power switch on Off or Fan position	Set switch to Lamp
Contact pins in module may not be connecting	Remove, then reinsert module

Lamp not seated in socket	Check lamp
Lamp burned out	Install new lamp <b>Note:</b> Wear cotton gloves or use soft cloth when inserting new lamp

## Image Angle Is Distorted

Probable Causes	Possible Solutions
Projector angle is incorrect	Adjust to 90°
Projector is not level	Adjust elevation feet accordingly

## Movement of Strange Shapes

Probable Causes	Possible Solutions
Moisture on glass slides in high humidity environments	Allow extended warm-up time  Store slides with silica desiccant to absorb moisture

## Early/Repeated Lamp Burnout

Probable Causes	Possible Solutions
Rapid cooling with fan	Move selector switch directly to OFF position following operation
Incompatible lamp type	Lamp should be ANSI approved consistent with recommendations in
Faulty lamp. Possibly stored in excessive temperature conditions or heat sensitive areas	Use lamps that have been stored at room temperature

Probable Causes	Possible Solutions
Internal projector components allowing irregular voltage	Have serviced
Restricted air flow ventilation	Air vents should be at least 3 feet from an obstruction

KODAK Projector Troubleshooting : Dark Screen Shutter

Probable Cause	Possible Solution
Light transmits onto screen when no slide is in gate	Dark Screen Shutter not engaging. Press Select Lever * to block light Select Lever is located on top of projector rim chassis behind the

Probable Causes	Possible Solutions
Lamp position on Light visible in rear compartment Tray cycles forward but no light transmits onto screen to view slide	Dark Screen Shutter remains  Step 1: Remove tray (may have to press lever while rotating tray to 0-zero position) Remove a single tray from tray.  Step 2: Shutter spring may be dislodged or missing. Send in for

**KODAK CAROUSEL/EKTAGRAPHIC Projectors : Focus Troubleshooting**

**Focus Troubleshooting**

Slide Not in Proper Focus	Auto focus Runs Continuously
Uneven Edge-to-Edge Focus	
Auto focus Drifts	Auto focus Delay
No Auto focus	
<b>All Slides Have</b>	
Consistent Out of Focus	Slight Out of Focus
Portions Out of Focus	Dark Portions
<b>Some Slides Have</b>	
Same Portions Out Of Focus	Other Factors Affecting Focus Behavior (AF & Non-AF)
Different Portions Out of Focus	
for Corrective Lens Wearers	

**CAROUSEL/EKTAGRAPHIC Focus Troubleshooting : Slide Not in Proper Focus**

Probable Causes	Possible Solutions
Slide itself not sharp	Examine slide for proper focus
First slide in tray not properly	Focus center of first slide manually
Slide in different type of mount from	Focus manually
Projection lens improperly installed	Make sure lens is moving when turning focus knob

## Uneven Edge-to-Edge Focus

Probable Causes	Possible Solutions
Slide itself is not sharp	Examine slide condition
Curved field lens used with glass, plastic, or non-embossed mounts	Tray a flat field lens; see Flat Field versus Curved Field Lens under
Curved field lens used for rear	Use a flat field lens

## Auto focus Runs Continuously

Probable Causes	Possible Solutions
Using mixed mounts:  Cardboard or plastic w/glass Multi-aperture (e.g., stereo)  Matte surface write-on w/different colored backgrounds *	Step 1: Turn off Auto focus ( <b>Not</b> an option w/CAROUSEL or Step 2: Adjust focus manually ( <b>Not</b> an option w/CAROUSEL 4600 or  If Autofocus use is necessary, have duplicate slides made in same type of mount (cardboard or plastic)
Ambient infrared light from lamp interferes w/photocell beam	Replace lamp. If older model (unpainted metal), replace w/Extra Bright Lamp Module (black housing assembly) to absorb & control stray

## Auto focus Drifts

Probable Causes	Possible Solutions
Excessive curvature or lack of uniformity of film  <b>or</b>  Moisture from humidity on slide  (if prolonged humidity, fungus may have formed)	Pre-warm slides w/projector lamp on for approximately 30 seconds and rotate tray slowly 30 degrees by pressing Select Level and  If no results:  turn Auto focus off (if possible) <b>or</b> fine-tune w/remote <b>or</b> have duplicates made in open mounts
Projector or screen is subject to vibration	Adjust properly on smooth, flat surface away from other machine

<b>Probable Causes</b>	<b>Possible Solutions</b>
Slides may shift position if mounted in less rigid plastic mounts	Allow longer pre-warm time before setting focus on first slide
Fixed focus lens, if used, may be installed backwards* * Print information on lens periphery should be facing the screen	Reinsert lens correctly
Lamp may have a hairline fracture near base scattering IR light	Rotate lamp 180 degrees. If no results, replace lamp

<b>Probable Causes</b>	<b>Possible Solutions</b>
Ambient infrared light from lamp interferes with photocell beam	If older model (unpainted metal), replace with Extra Bright Lamp Module (black housing assembly)
Only occurs when no slide is in gate	Use blanking slides with models manufactured prior to 1/97 *  <b>or</b>  Turn off AF (EKTAGRAPHIC  Internal cut-off switch added to eliminate open gate drifting of auto

## No Auto focus

<b>Probable Causes</b>	<b>Possible Solutions</b>
Null needs adjustment or faulty	Have serviced by an authorized

## Auto focus Delay

<b>Probable Causes</b>	<b>Possible Solutions</b>
Auto focus trying to adjust for warped mount (if cardboard) or excessive curvature and flex in film --KODACHROME film has a thicker base & is less susceptible to popping but will not withstand projection as well as	Use glass mounts

## Consistently Out of Focus

**Problem:** Consistently out of focus when autofocus engaged but OK when adjusted manually

Probable Causes	Possible Solutions
Faulty photocell or circuit board	Have serviced by authorized
Fixed focus lens, if used, may be installed backwards* * Print information on lens periphery should be facing the screen	Reinsert lens correctly

## Portions Out of Focus

**Problem:** All slides consistently have **portions** of an image out of focus with or without autofocus engaged

Probable Causes	Possible Solutions
Slide gate may be out of alignment or pressure pads may Condenser lens is out of	Have serviced by an authorized technician

## Slightly Out of Focus

**Problem:** All slides **slightly** out of focus with or without autofocus engaged & subject orientation reversed

Probable Causes	Possible Solutions
Slides mounted with emulsion facing lamp	Have slides remounted with emulsion facing the screen
Loaded without proper orientation	Make sure slides are properly orientated in the tray (number will usually be in the upper right corner)

## All Have Dark Portions

**Problem:** All slides have dark portions and behavior is **not consistent** with another projector with the same

Probable Causes	Possible Solutions
Internal optical components may be  condenser lens mirror heat absorbing glass	Clean optics with lens cleaner

## CAROUSEL/EKTAGRAPHIC Focus Troubleshooting : Same Portions Out Of Focus

**Problem:** Some select slides have the **same portions** of an image out of focus with or without autofocus engaged and behavior is consistent with another projector with the same lens

Probable Causes	Possible Solutions
Original exposure may lack correct focus or depth of field	Make certain the camera is working properly and re-shoot the slide
Dirt, fungus or foreign matter on	<a href="#">Clean slide Find &lt;DAMAGE&gt;</a>

## Different Portions Not Focus

**Problem:** Some select slides have the **different portions** of an image out of focus with or without autofocus engaged and behavior is consistent with another projector with the same lens

Probable Causes	Possible Solutions
Lens may have aberration in one or more elements	Replace the lens

## Other Factors Affecting Focus

**NOTE:** This info applies to AF & Non-AF Projectors

Probable Causes	Possible Solutions
Environment	Control the temperature, humidity & time allotment for adjusting  If slides react more favorably to warmer conditions when presented, the EKTAPRO 80 Slide Tray will retain approximately .30 percent more heat to expedite popping (into
Mixed Slides	Don't mix slides with varying base thickness (e.g., KODACHROME & EKTACHROME dupes can be made from both.

## Flat- Versus Curved-field lenses - Rack Mount Lenses from Kodak

### Flat Field Lenses - RECOMMENDED FOR MAJORITY OF APPLICATIONS

Designed to be used with glass mounted slides

Used for open frame slides where film is held relatively flat in the mount

For mixed glass slides & open-framed mounts, or slides having the emulsion toward the lamp



**Curved Field Lenses** compensate for curve of transparency when mounted in open frame, permitting improved center-to-corner sharpness on the screen

The curved field lens was made to specifications for open-face mounts in the 1960's and 1970's.

Curved field lenses can often be identified by the blue printing on the front of the barrel of the lens. It also can have the letter C in its name, such as EKTANAR-C lens. 102 and 102-152mm are also curved field lenses.

**NOTE:** Both flat field and curved field lenses can be used in the EKTAGRAPHIC, EKTAGRAPHIC III, and CAROUSEL Projectors

<b>For Slide Type</b>	<b>Flat Field</b>	<b>Curved Field</b>
Open-frame cardboard or plastic	Recommended	Acceptable
Glass-mounted	Recommended	Acceptable
Duplicates, emulsion away from	Acceptable	Not Recommended
KPP open-frame cardboard *	Acceptable	Recommended **
Rear screen projection application	Recommended	Not Recommended
Mixed or unknown	Acceptable	Not Recommended

\* Kodak Processing uses an embossed "automated" cardboard mount with a beveled edge

\*\* With flat screen and front