# Choo Choo Vision

# CAB-CAM 6

# Lens Installation Guide

# Contents

## Introduction

Congratulations!  You have purchased a unique technological advancement for Model Railroading that immerses you into the world of your layout.    Take photos of your layout, live-stream video over the internet, or host Remote Operations sessions.

**This instruction guide is specific to the changing a lens for the Choo Choo Vision CAB-CAM 6.**
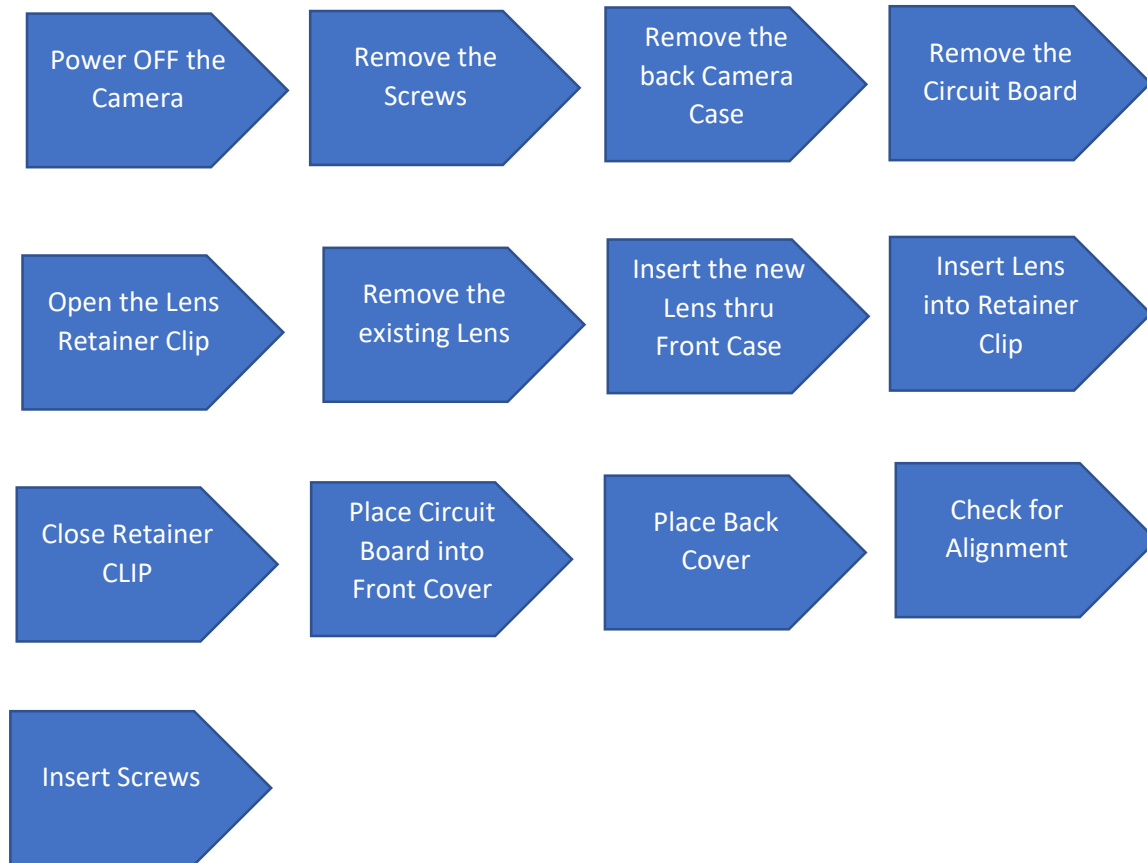
## Camera Controls

1. Power ON Button
   - Press the Power ON button for 2 seconds to turn the camera ON.   The camera light will blink rapidly upon power-up.
2. Power OFF:  Magnetic Reed Switch
   - To turn the camera OFF, swipe a magnet across the area above the camera lens.
3. Status Indicator Light
   - Fast Blinks for 2 seconds:   Camera is starting up
   - Off after Fast Blinks:  Waiting to connect to Wi-Fi
   - Steady Glow:  Camera is running and has connected to WiFi
   - Off:  Camera is OFF
   - Blink very 3 seconds:   Camera is in charging mode.
4. USB Port  (external power)
   - Accepts 5V Power from USB Phone Charger
   - Accepts Choo Choo Vision DCC Power Converter
5. Aux Port
   - Accepts secondary auxiliary magnetic switch for powering off the camera
   - Accepts Pan-Cam interface cable
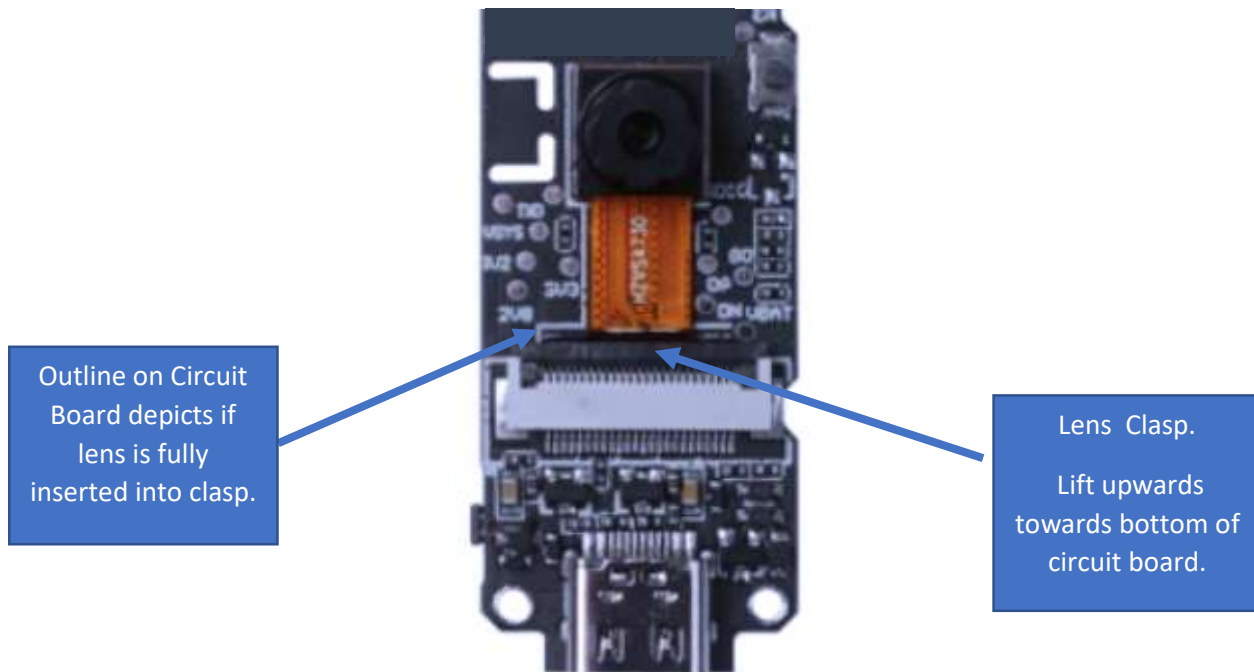6. RESET
   - Resets / Reboots the camera.

**The basic steps are:**

Power OFF the Camera → Remove the Screws → Remove the back Camera Case → Remove the Circuit Board

Open the Lens Retainer Clip → Remove the existing Lens → Insert the new Lens thru Front Case → Insert Lens into Retainer Clip

Close Retainer CLIP → Place Circuit Board into Front Cover → Place Back Cover → Check for Alignment

Insert Screws

## Steps:

- Power OFF: Plug the camera into USB Power – The camera will turn ON. Swipe a magnet across the area above the lens. The status light will pulse 3 times and then go out, indicating that the camera has been powered OFF. Unplug the camera from USB power.
- Remove Screws: Turn the camera face down. Remove the two hex-head screws located on the back of the camera.
- Remove the Back Cover: The back cover is hinged to the front cover at the top of the camera. Gently lift the bottom edge of the back cover up. Then separate the back of the camera from the front cover.
- Remove the Circuit Board: Turn the camera over so you are looking at the front cover. To remove the circuit board, hold the sides of the front cover and gently press on the lens. This pressure will separate the circuit board from the front cover.

- Remove the Existing Lens:   Locate the clasp that holds the end of the lens ribbon cable.   The lens clasp holds the lens ribbon cable.  The lens clasp is hinged towards the bottom of the circuit board.  Gently pry the **black** portion of the lens clasp upwards towards the bottom of the circuit board.



Outline on Circuit Board depicts if lens is fully inserted into clasp.

Lens  Clasp.

Lift upwards towards bottom of circuit board.

- Remove the Existing Lens:  Gently wiggle the existing lens and pull it out from the clasp, pulling the lens towards the top of the circuit board.
- Insert the New Lens:  Locate the front cover.  Slip the new lens ribbon cable thru the large hole in the front cover.    (Note: only required for long lenses).
- Insert the New Lens into the Lens Clasp:   Gently wiggle the end of the new lens into the retainer clip.  The "wires" on the ribbon cable should face towards the circuit board.  Ensure that the ribbon is fully inserted into the lens clasp.  (Note the markings on the circuit board)
- Close the Lens Clasp.    Gently close the retainer clip by pressing the clip downwards towards the circuit board.   You should fell a "click" when the clasp.
- Place the Circuit Board into the Front Cover:   With the front cover facing downwards, gently place the circuit board into the front cover.   Ensure that the tiny reset button is positioned inside the cover.   Give the circuit board a slide push towards the top of the front cover.
- Place the Back Cover:   The back cover is hinged to the front cover at the top edge.  Mate the two covers together at the hinge, and gently lower the back cover onto the top cover.
- Check for Alignment:  The two covers should align properly.  If they do not, DO NOT FORCE the covers together.   You may need to gently press the circuit board towards the top edge by pressing on the USB connector.    Ensure that the battery wires are not in the way of the case edges.

- Insert Screws:  Insert the two hex-head screws into the camera case.  It's best to first turn the screws counterclockwise until you feel the threads.   Then turn the screw clockwise to tighten the screw.   Do not over-tighten the screws.

**Testing the camera installation**

- Plug the camera into USB power.
- The camera status light should blink quickly for 2 seconds and go off.
- After a couple of seconds, the camera status light should turn on (dimly).
  - If the solid light does not come on, then either the camera cannot access your WiFi, or the lens was not installed properly.   Contact Product Support for assistance.
- Open a web browser and enter the camera's address
- Press the Start Video button and confirm that the lens was installed properly.

## Product Support:

**If you have any question regarding the setup, use, or suggestions, please feel free to contact us.**

- Email:   support@ChooChooVision.com
- Website:   Send a request via our website www.ChooChooVision.com/contact