

# Replacing the PCM

## Instruction Sheet

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### INTRODUCTION

Use the following instructions when replacing or upgrading a Processor Control Module (PCM) in CP2000-ZX and CP2000-M/MR projectors.

The entire procedure requires access to the cardcage, complete removal of the PCM assembly, and in CP2000-M/MR 119-101101-01 models installing a new faceplate when upgrading from a 3.1 PCM (001-100536-03/04) to a 4.1 PCM (001-100536-06). The entire procedure can take up to 20 minutes to complete and should be performed by a qualified service technician.

### KITS REQUIRED

003-002884-01 PCM Kit (includes PCM #001-100536-06 board only)

003-100536-06 PCM Kit (includes PCM #001-100536-06 board, faceplates for CP2000-ZX and CP2000-M/MR and required hardware) *NOTE: The PCM comes pre-assembled with the CP2000-ZX faceplate.*

### SAFETY AND WARNING GUIDELINES

**⚠ DANGER** HIGH VOLTAGES MAY BE EXPOSED: Always power down and disconnect power sources prior to servicing. Once the projector is powered down, allow the cooling fans to automatically turn OFF before disconnecting from AC and opening the projector. Depending on your projector model this can take 10-15 minutes.

**⚠ WARNING** QUALIFIED SERVICE TECHNICIANS REQUIRED: All module replacement procedures must be performed by qualified service technicians.

**⚠ WARNING** NON-INSULATED DANGEROUS VOLTAGES MAY BE EXPOSED: Always disconnect from AC prior to disassembly.

**⚠ WARNING** OBSERVE ALL ELECTROSTATIC PRECAUTIONS: Use a grounded wrist strap when handling electronic assemblies.

**⚠ CAUTION** Never operate the projector (or the fans) without all the covers installed.

## TOOLS REQUIRED

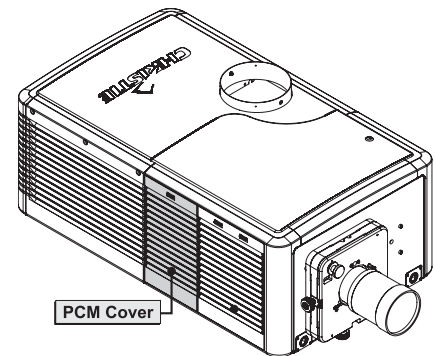
- #1, #2 Phillips screwdriver
- 3/16" nut driver

## INSTRUCTIONS

### FOR CP2000-ZX (KIT #003-100536-01):

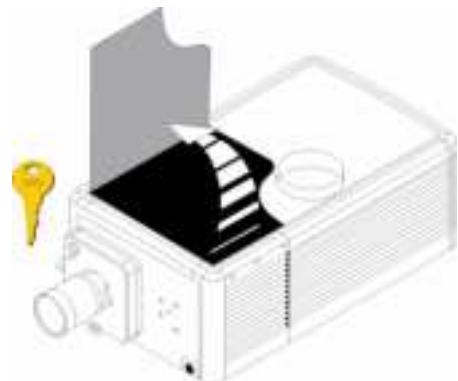
**⚠ WARNING** OBSERVE ALL ELECTROSTATIC PRECAUTIONS: Use a grounded wrist strap when handling electronic assemblies.

1. Remove the PCM cover to access the Communication Panel.
  - a. Push on the tab at the top of the cover (**Figure 1**).
  - b. Tilt the cover slightly then lift enough to clear tabs at the bottom and remove.



**Figure 1**

2. Remove the front lid. (**Figure 2**)
  - a. Unlock the front lid using the high security key.
  - b. Raise the lid and slide it out from the opposite side to remove.
3. Using a #2 Phillips, remove the four screws securing the PCM faceplate; two from the inside and two from the outside.
4. Pull the PCM assembly out of the cardcage.
5. Slide the new PCM assembly into the cardcage and secure using the four screws from Step 3.
6. Replace the front lid and PCM cover.



**Figure 2**

**FOR CP2000-M/MR:**

**⚠ WARNING** OBSERVE ALL ELECTROSTATIC PRECAUTIONS: Use a grounded wrist strap when handling electronic assemblies.

**⚠ WARNING** Do not downgrade software to 2.0 or lower on projectors with a 4.1 PCM.

Replacing a PCM in -02 models or higher (Kit #003-002884-01)

1. Remove the projector's top lid. (**Figure 3**)
  - a. Use a #2 Phillips to loosen the seven captive screws securing the top lid to the projector frame.
  - b. Unlock the rear access door using the low security key.
  - c. Lift the lid up from the rear of the projector and pull it away from the two tabs on the front skin.



**Figure 3 Remove Top Lid**

2. Remove the six screws securing the high security cover. (**Figure 4**) Unlock the high security access lock. Lift the lid and slide it out.



**Figure 4 Remove High Security Cover**

3. Remove the clips securing the harnesses to the cardcage (**Figure 5**).
4. Use a #2 Phillips to loosen the two thumbscrews at the top of the cardcage.



**Figure 5 Remove Harness Clips**

5. Remove three screws from each side of the two faceplates. (**Figure 6**) **Do not remove the center screws just yet.** This will allow you to pull the cardcage out a few centimeters. Only apply force to the top edges of the handles only.



**Figure 6**

6. With the cardcage out slightly, remove four screws from each side of the cardcage.
7. Remove the four center screws securing both faceplates to the cardcage. (**Figure 6**)
8. Tilt the I/O faceplate slightly to allow removal of the PCM assembly.
9. Separate the PCM faceplate from the PCM PCB:
  - a. Remove the two nuts securing the BNC's to the faceplate (2x 9/16").
  - b. Using a nut driver, remove the six standoffs (3/16") securing the DVI-D A, DVI-D B and the 'RS-232' B connectors to the faceplate.
  - c. Remove the two screws securing the faceplate to the PCM PCB. Reuse the faceplate with the new PCM PCB.
10. Secure the new PCM PCB in the kit to the faceplate repeating the above instructions in reverse and reusing the hardware from the old PCM assembly.

#### Upgrading the PCM in -01 models (Kit # 003-100536-06)

1. Perform Steps 1 - 8 in the procedure above.
2. Swap the faceplate on the PCM assembly with the loose one in the kit (Figure 8). *Note: The faceplate attached to the PCM in the kit belongs to the CP2000-ZX.*
  - a. Remove the two nuts securing the BNC's to the faceplate (2x 9/16").
  - b. Remove the six standoffs (3/16") securing the DVI-D A, DVI-D B and the 'RS-232' B connectors to the faceplate. (**Figure 7**)

- c. Using a #1 Phillips, remove the two screws from the L-shaped bracket securing the faceplate to the PCM. (**Figure 7**)



**Figure 7 Separate ZX Faceplate from PCM**

- d. Install the new CP2000-M/MR faceplate (**Figure 8**) to the PCM, repeating the above steps in reverse and reusing the hardware.
- e. Fasten the two handles from the kit to the faceplate. Tighten screws to a torque setting of 3.5 in-lbs.
3. Slide the new PCM assembly into the cardcage. Repeat steps above in reverse to secure PCM assembly. (**Figure 9**)



**Figure 8 New PCM Faceplate**



**Figure 9 New PCM Assembly Installed**