

## Carnival

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FREE PLAY + HIGH SCORE SAVE KIT

ORIGINAL SEGA / GREMLIN ARCADE HARDWARE



STANDARD + WI-FI EDITIONS

Z80 CPU | Daughter card | Pin 1 | Installation | Support

## Before you begin

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### ONE INSTALLATION - TWO KIT VERSIONS

Standard and Wi-Fi kits use the same Z80 daughter-card installation. Wi-Fi adds optional online scoring after the arcade hardware is working.

### SAFETY FIRST

Switch the cabinet OFF and unplug it before touching the arcade PCB. Avoid the CRT high-voltage area. Use an ESD-safe work surface and never install hardware while power is connected.

### PREPARATION CHECKLIST

- Verify Carnival plays normally on the original PCB before beginning.
- Photograph the Z80 location, Pin 1/notch orientation, and board connectors.
- Confirm the original Z80 is in a compatible 40-pin socket.
- Label any cabinet connectors you disconnect and prepare a safe workbench.
- Inspect the Z80 pins and socket for corrosion, distortion, or damage.

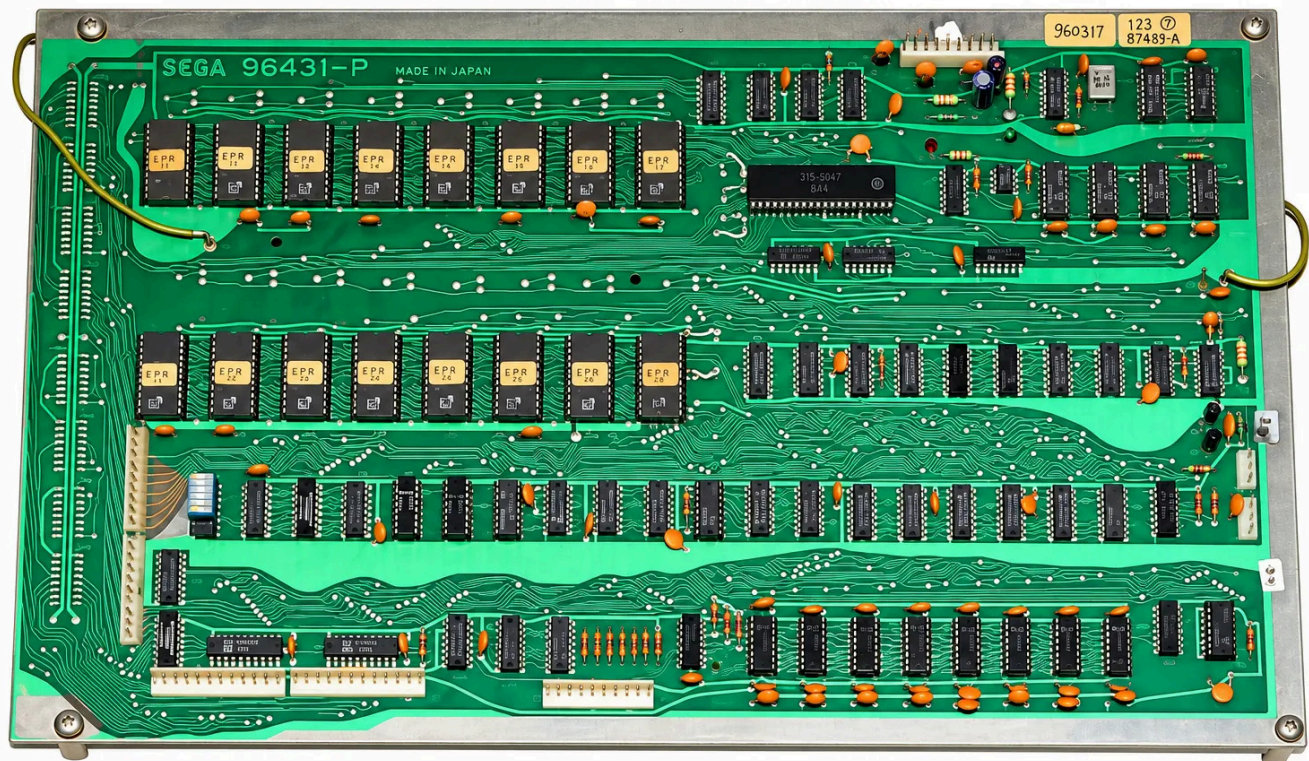
### WHAT IS INCLUDED / REQUIRED

Kit: 1 HighScoreSaves Carnival Z80 daughter card. A compatible Z80 CPU is required: transfer the original socketed CPU, or use a purchased Z80 option. A 40-pin socket must already be installed.

## STEP 0 / HARDWARE IDENTIFICATION

## Identify the original Carnival PCB

Use the reference photo below to confirm you have the documented original Sega/Gremlin Carnival PCB before beginning installation.



Reference photo: original Carnival PCB.

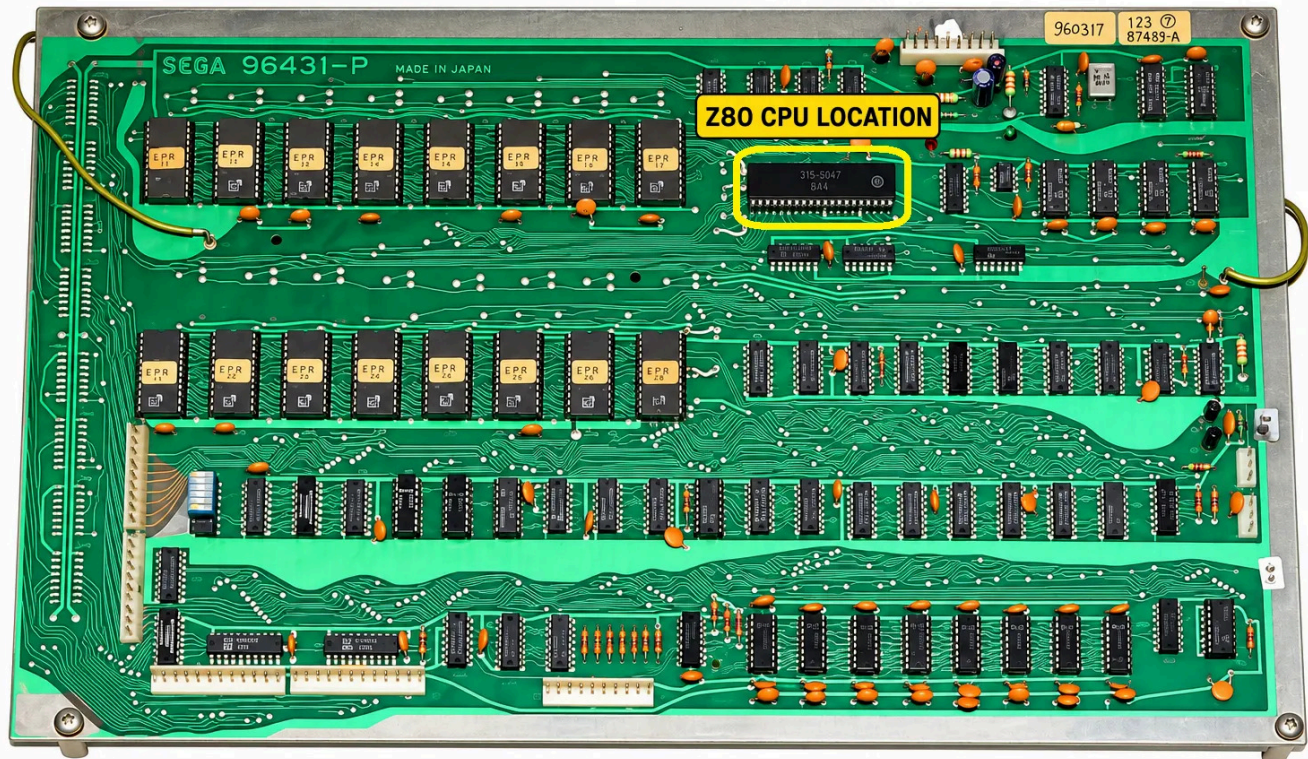
### VERIFY THE BOARD BEFORE INSTALLING

Compare your PCB layout, connectors and major components to this image before proceeding.

## STEP 1 / FIND THE PROCESSOR

## Locate and remove the Z80 CPU

With the PCB unplugged, locate the original Z80 CPU using the marked photo below. Before removal, note the CPU notch and the original socket orientation.



Marked reference photo: Z80 CPU location.

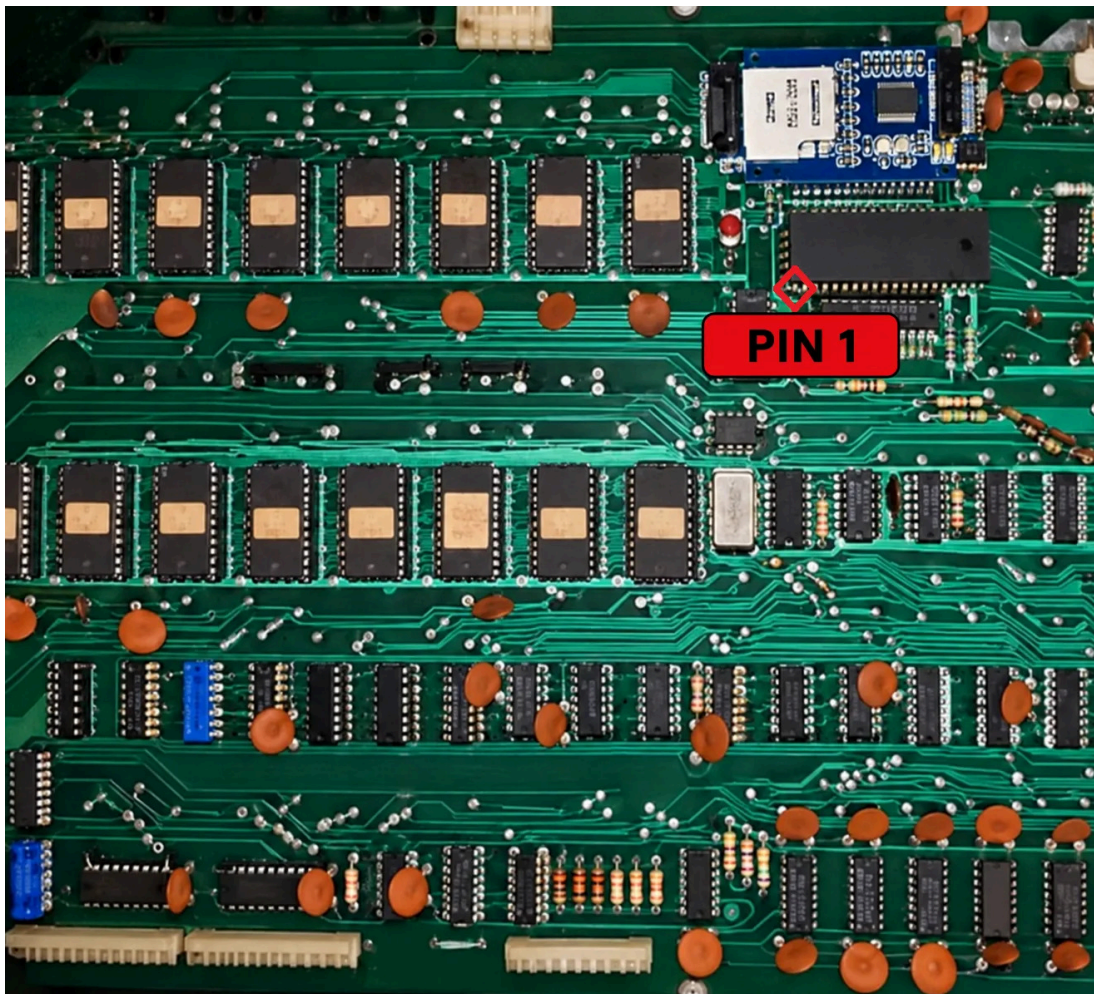
### REMOVE ONLY THE SOCKETED Z80

Lift evenly from both ends and keep all pins straight. Place the CPU on an ESD-safe surface.

## STEP 2 / CORRECT PROCESSOR ORIENTATION

### Transfer Z80 to the daughter card

Install the original Z80 CPU onto the supplied daughter card exactly as shown below. Match Pin 1 to Pin 1 and verify all pins enter the socket correctly before pressing the CPU fully into place.



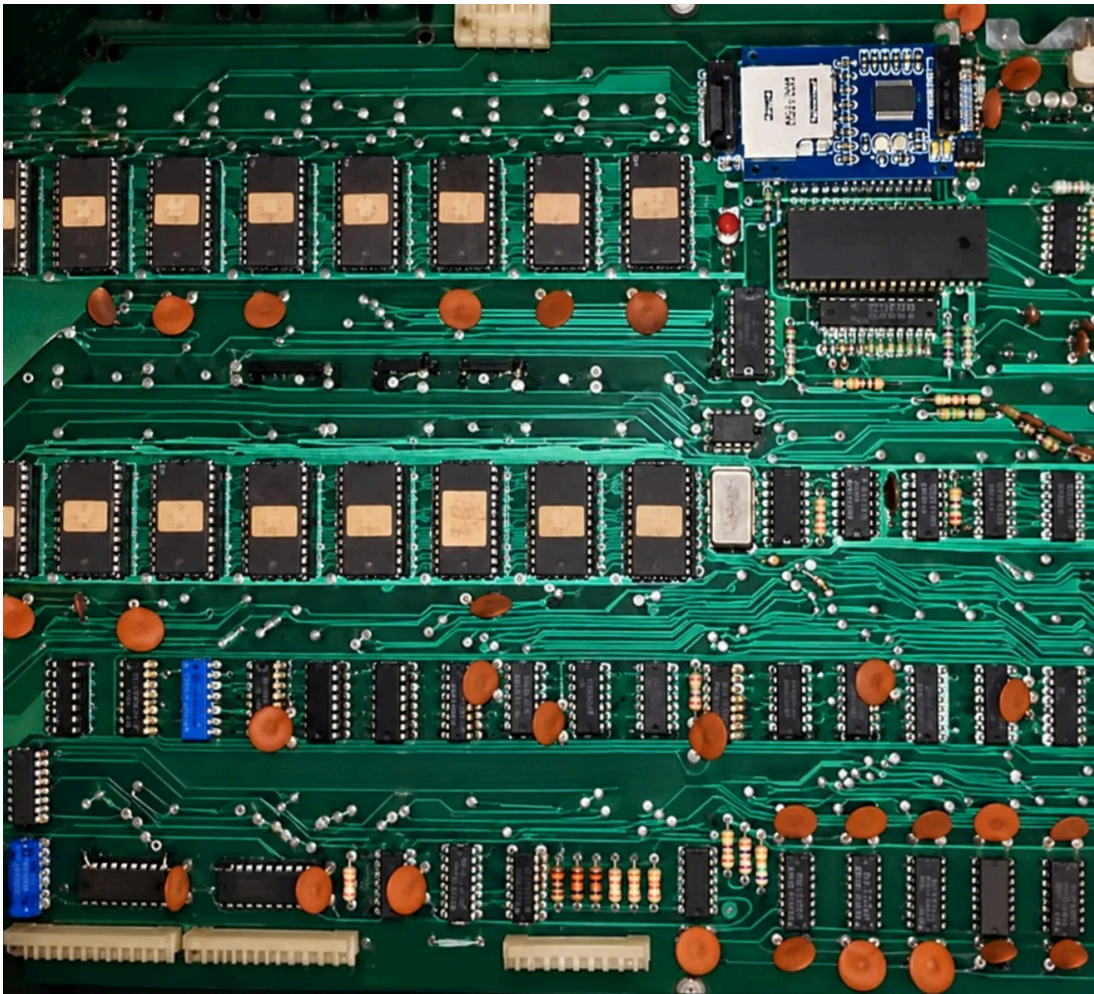
Reference photo: Z80 installed on the daughter card with Pin 1 orientation marked.

#### CHECK PIN 1 CAREFULLY

Do not force the CPU. If any pins are misaligned, remove the CPU and straighten them before reinstalling.

## Install the Carnival daughter card

After the Z80 is seated correctly on the daughter card, install the daughter-card assembly into the original Carnival Z80 socket. Align the pins carefully and press down evenly.



Reference photo: Carnival daughter card installed on the original PCB.

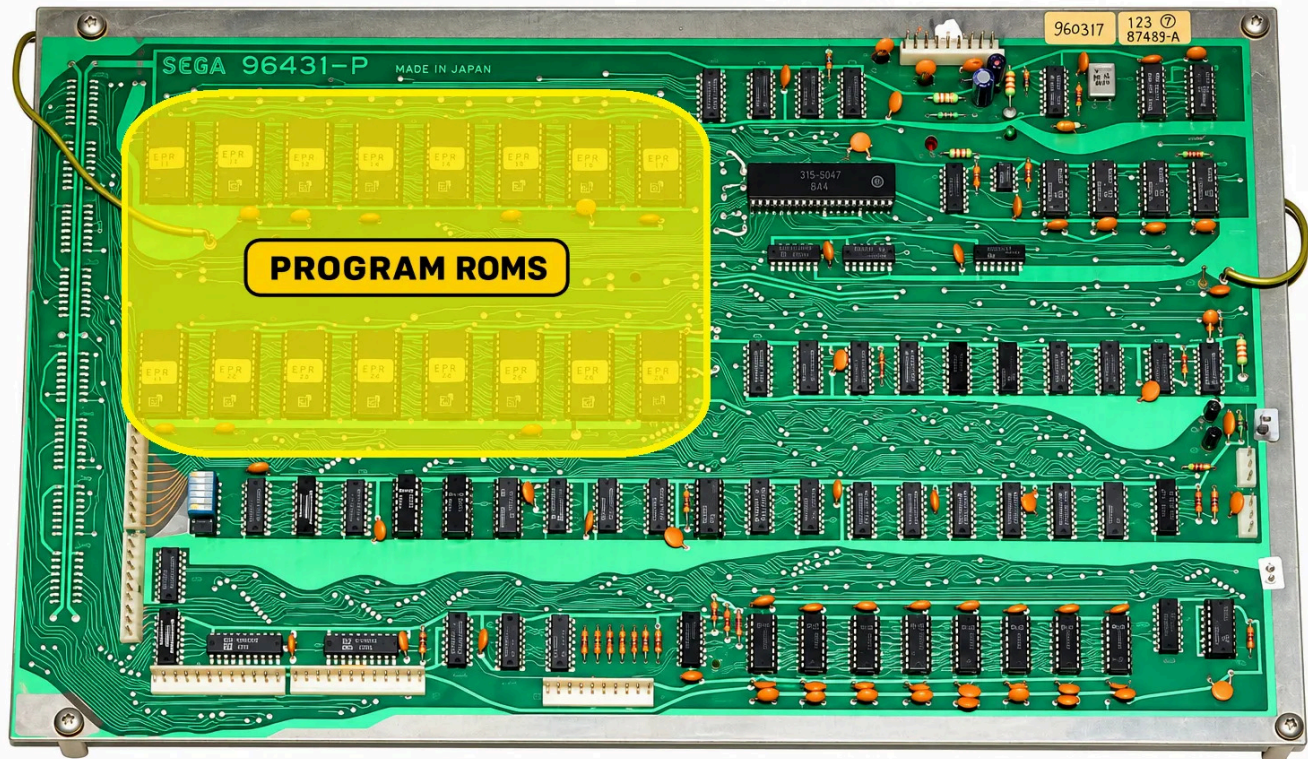
### SEAT THE CARD EVENLY

Do not force the assembly. Confirm the header is aligned with the original socket before fully seating it.

OPTIONAL FEATURE / NOT REQUIRED FOR INSTALLATION

## Optional ROM Saver and clearance

The source guide identifies the original program ROM area used for the supported optional ROM Saver feature. This is optional and not required for the normal daughter-card installation.



Reference photo: optional program ROM area for ROM Saver and clearance review.

### OPTIONAL STEP ONLY

You can complete the standard installation without using ROM Saver. Always confirm daughter-card clearance before power-up.

## Final inspection and first test

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### BEFORE POWERING ON

- The original Carnival Z80 CPU is correctly seated on the daughter card, with Pin 1 aligned.
- The daughter-card header is fully inserted into the original 40-pin CPU socket.
- There are no bent CPU/header pins or contact with adjacent components.
- Original program ROMs remain in place unless the optional ROM Saver procedure was intentionally used.
- Every cabinet wire and connector is restored using your reference photos.

### FIRST POWER-ON TEST

Reinstall the PCB, power on, and confirm normal Carnival gameplay. Verify Free Play or Coin-Up settings and save a qualifying score. Power cycle and check that the saved score persists.

### HOW TO OPEN THE SETTINGS MENU

With the game off, press and hold Player 1 Start as you switch on power. Release when the on-screen prompt instructs you. Review supported game, attract sound, and score options.

### IF THE GAME DOES NOT START

Switch off immediately. Recheck Z80 Pin 1, socket alignment, CPU pins, daughter-card seating, and clearances before another attempt.

## Wi-Fi-enabled kit setup

### SAME PHYSICAL INSTALLATION

Standard and Wi-Fi Carnival kits use the same Z80 daughter-card installation. The Wi-Fi edition adds online score submission after local gameplay and score saving are working.

### AFTER THE ARCADE KIT IS WORKING

1

#### Obtain your PK and SK account keys

Follow the account setup emails and instructions provided by HighScoreSaves.

2

#### Enter online settings in the kit menu

Enter the supplied PK and SK keys exactly; enable online scoring and save the settings.

3

#### Connect the module to Wi-Fi

Use the module temporary Wi-Fi network and setup page to join a compatible 2.4 GHz network.

4

#### Test an online score

Submit a qualifying score after Wi-Fi setup, then check your linked online score page.

### KEEP YOUR PK / SK KEYS PRIVATE

Wi-Fi configuration is version-specific. Keep your PK and SK private and use the current HighScoreSaves instructions for detailed connection steps and troubleshooting.



#### Open complete Wi-Fi setup instructions

Wi-Fi kit details, 2.4 GHz networks, account keys and online scoring

## Helpful resources and support

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These cards open verified HighScoreSaves resources. Review the live compatibility, processor, and Wi-Fi documentation before installing an upgrade on original arcade hardware.



### Carnival kit product page

Kit versions, Z80 and 40-pin socket options



### Carnival PCB compatibility

Confirm original Sega/Gremlin hardware requirements



### Carnival operating and service manual

Original Gremlin/SEGA 420-0498 manual



### Carnival original schematics

Original Carnival board layouts and wiring diagrams



### Standard vs. Wi-Fi kit setup

Wi-Fi instructions, networks, and online scoring



### HighScoreSaves Tips and Tricks

Settings, menus, and kit feature reference



### Installation guide library

Other HighScoreSaves arcade PCB kit instructions



### Contact HighScoreSaves

Technical support and compatible hardware questions