

## **Installation**

This page will describe how to install CoCoVGA in a Color Computer 2 with a rev B mainboard. Drilling the case to mount the button board is not necessary, but recommended.

For installation of one of Zippster's (Ed Snider's) composite and audio boards, see his page at:

<https://sites.google.com/site/thezipsterzone/home/coco2-projects/coco2-composite-board-2/installing-the-board-type-a>

## **Required Tools**

For CoCoVGA main board

Phillips screwdriver to open the CoCo 2 case

Small flat screwdriver and/or DIP chip puller to remove 6847

For CoCoVGA button board

Printer and ruler to print template and check that it is full size

Tape to temporarily attach template

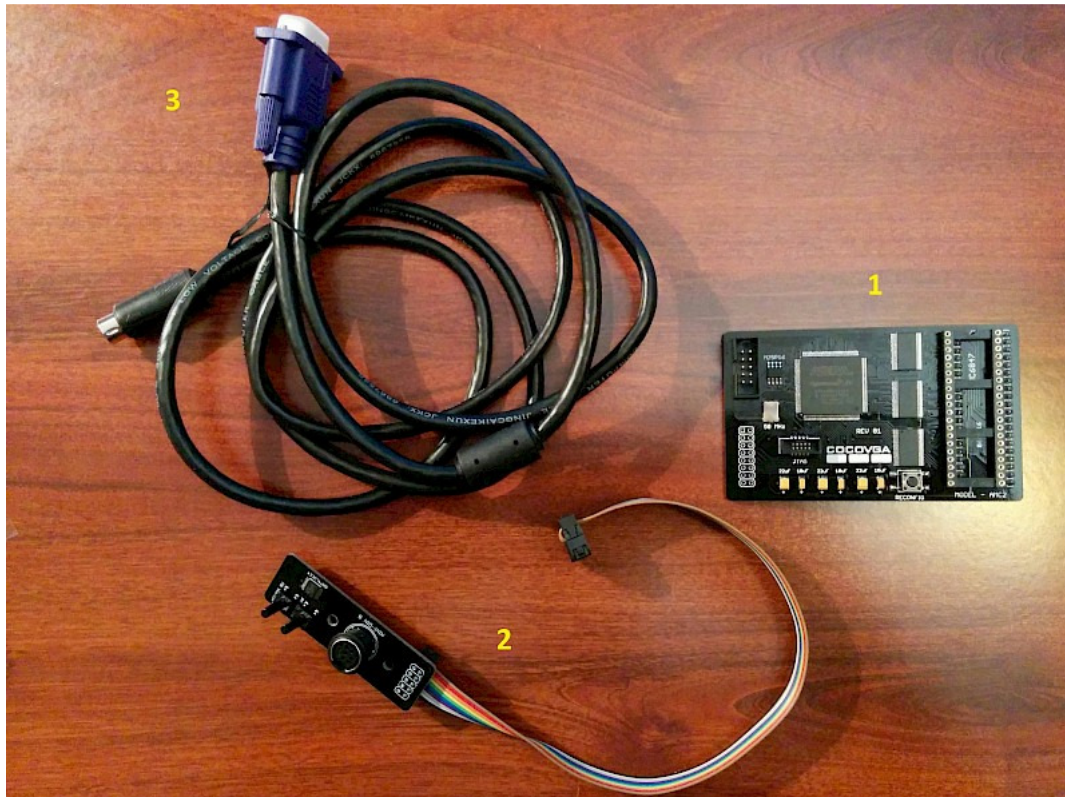
Drill and bits with diameter 3.5mm (~1/8 in), 4mm (~1/8 in or a little bit larger, if desired), and in various steps up to 12mm (~1/2 in) and/or a round file, knife or razor blade

Small flat or Phillips screwdriver and pliers to attach button board to case using machine screws, standoffs, and nuts

## Parts in Kit

A CoCoVGA kit contains the following items:

1. CoCoVGA main board
2. CoCoVGA button board
3. DIN-to-HD15 (VGA) cable
- 2 machine screws with hex standoffs and nuts (not shown)



## Installation

Step 1 - Open the case

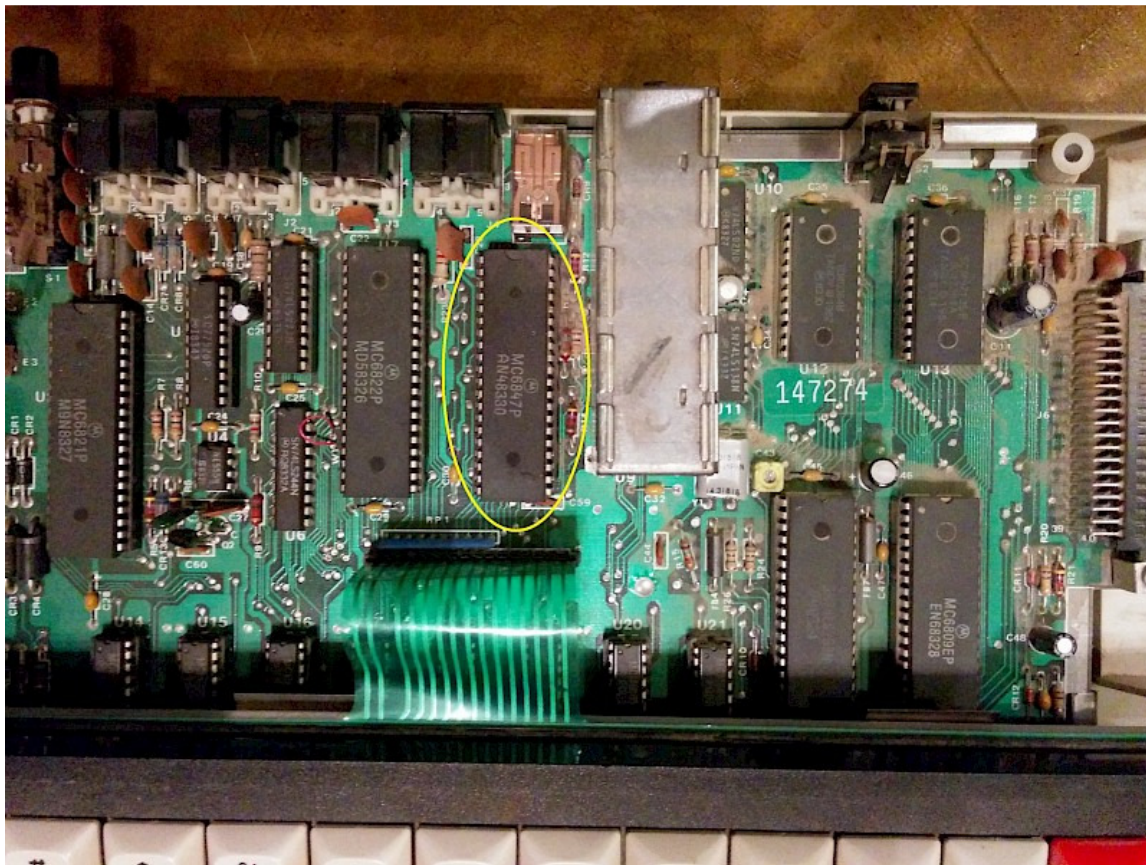
Disconnect the CoCo 2 from power and all peripherals.

Use a Phillips screwdriver to remove the 6 screws from the underside of the Color Computer 2 and set the screws aside for later.

Set the CoCo 2 back down on its base and remove the case top.

Step 2 - Remove/relocate 6847

Find the 6847 which should be located near the RF modulator (a metal box where you normally plug in your TV), or if you have a composite mod already installed, near that board.



In this model Color Computer, the 6847 is installed in a socket. Use a small screwdriver to gently pry between the socket and the chip a small amount on one side, and then the other, alternating back and forth until the 6847 can be removed from the socket. Alternatively, use a DIP chip puller.

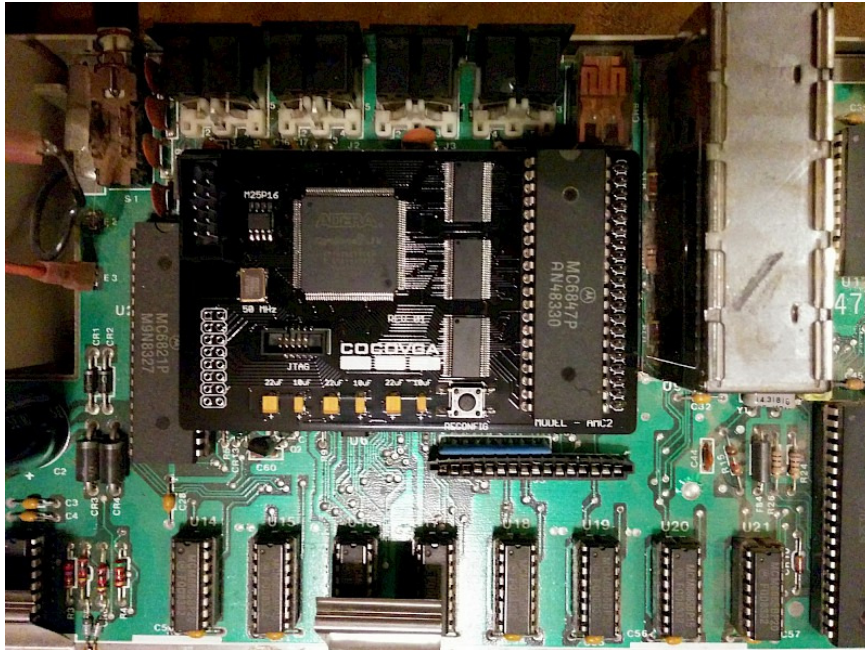
If your CoCoVGA main board already has a 6847 installed in it, then you will not need the one you just removed.

If your CoCoVGA main board does not have a 6847 installed in it, then ensure all of the 6847 pins are straight and gently insert it into the socket on the CoCoVGA main board. (See picture in next step to check correct orientation. Note the half-circle indentation on one end of the chip.)

**Step 3 - Insert the CoCoVGA main board**

Plug the CoCoVGA main board into the socket where you removed the 6847.

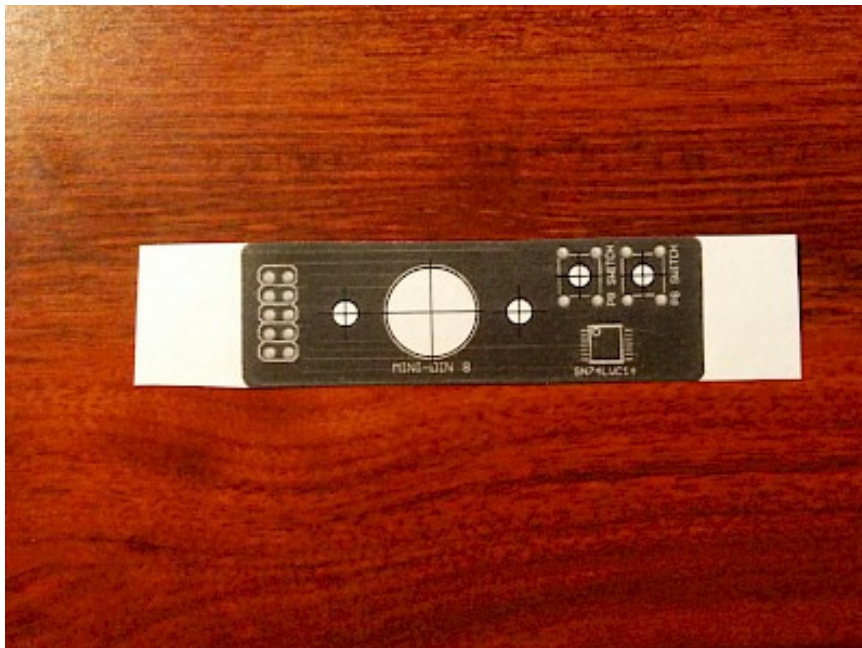




#### Step 4 - Install the CoCoVGA button board

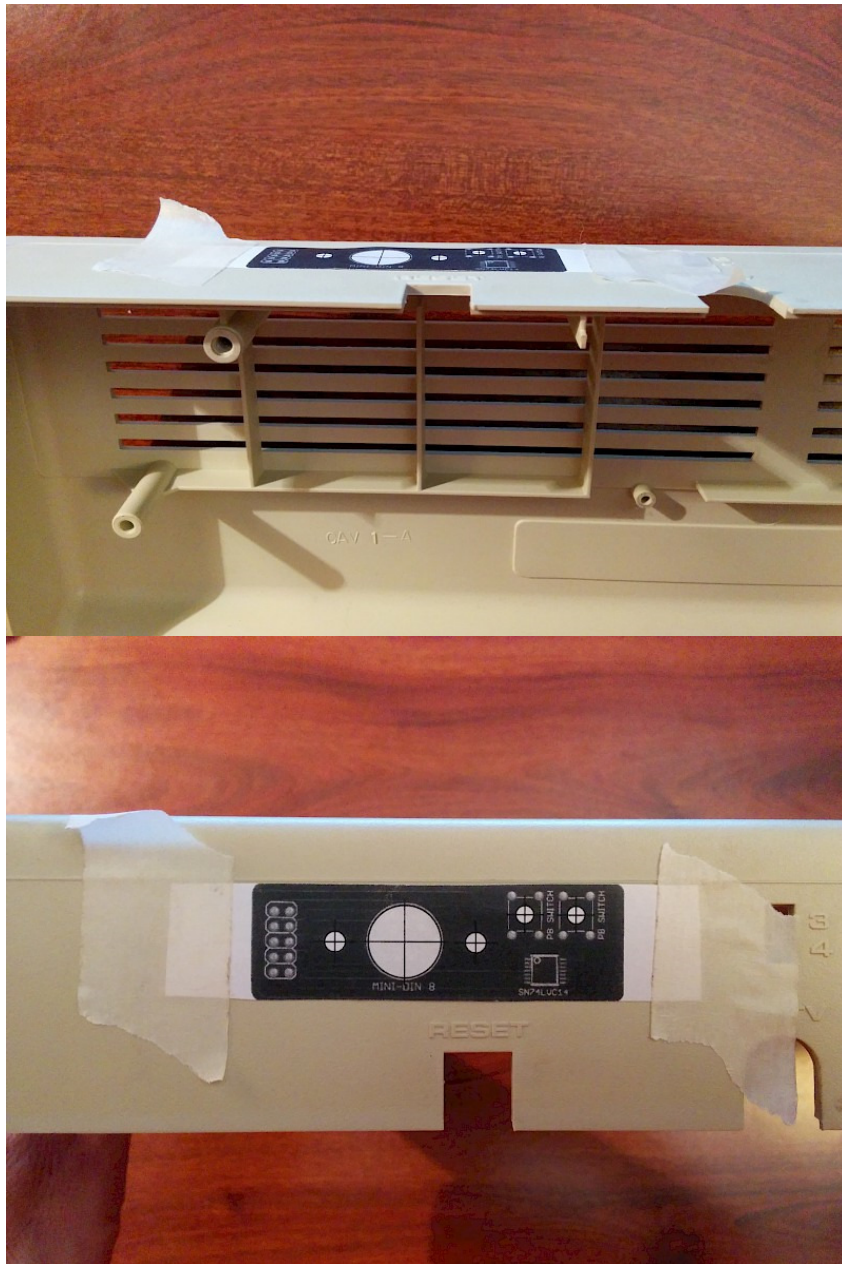
Print the PDF template at 100%. Do not use "fit to page". Match your ruler against the printed rulers to make sure it is printed correctly. Otherwise, it may be necessary to ask your software to scale it up or down.

Cut out the template leaving some paper available to attach to the back of the top half of the CoCo 2's case.



Paying attention to obstacles inside the case (such as locations for screws), place the template

in an appropriate location and attach it using tape. Over the reset button is likely the best spot. Note that the screw post is more likely to interfere with the button board than the strengthening beam closer to the middle of the case, so it is appropriate to err towards installing a bit more towards the middle of the case and away from the screw post.



The recommended diameters of the 5 holes are as follows:

- DIN jack - 12mm ( $\sim .473$  in or about  $1/2$  inch)

- 2 machine screw holes (on either side of the DIN jack) - 3.5mm ( $\sim .138$  in or about  $1/8$  inch)

- 2 button holes - 4mm ( $\sim .158$  in or about  $1/8$  inch; some owners have suggested

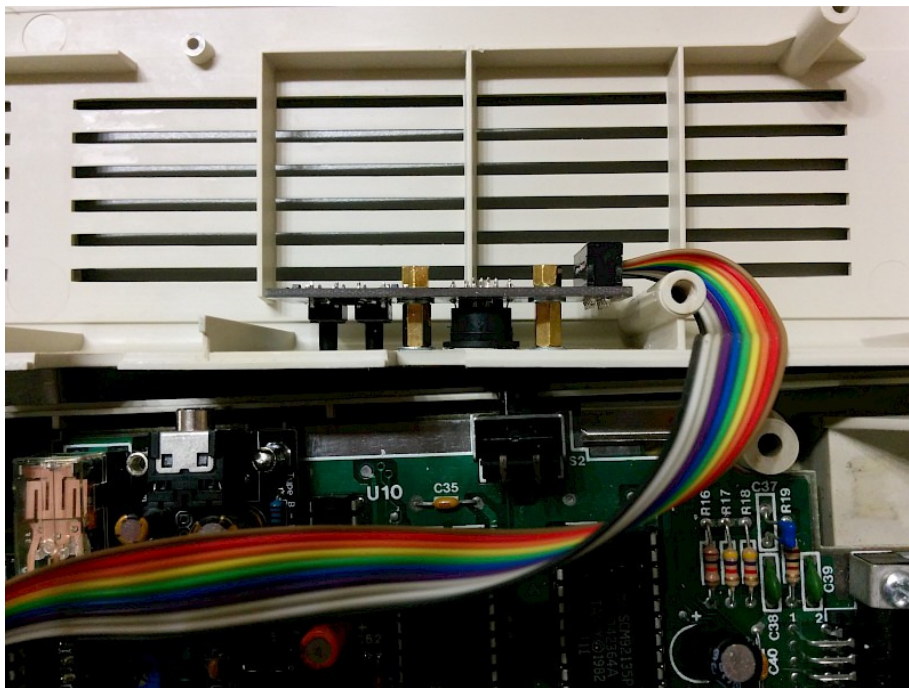
a little larger to avoid the buttons binding)

The 4 smaller holes can be drilled using the appropriate sized bit.

**It is strongly recommended that a smaller bit is used to drill a pilot hole for the larger DIN jack.** (There is a high risk of tearing or cracking the case!) Then, progressively larger and larger drill bits may be used to finish drilling the hole to the appropriate size. Note that given how soft the CoCo 2 case is, it is possible to run larger bits in reverse to make the hole and then a knife or blade can be used to cut the extruded collar away from the inside of the case.

If a 12mm or 1/2 inch drill bit is not available or won't fit in your drill's chuck, then once the hole for the DIN jack is large enough, a round file may be used.

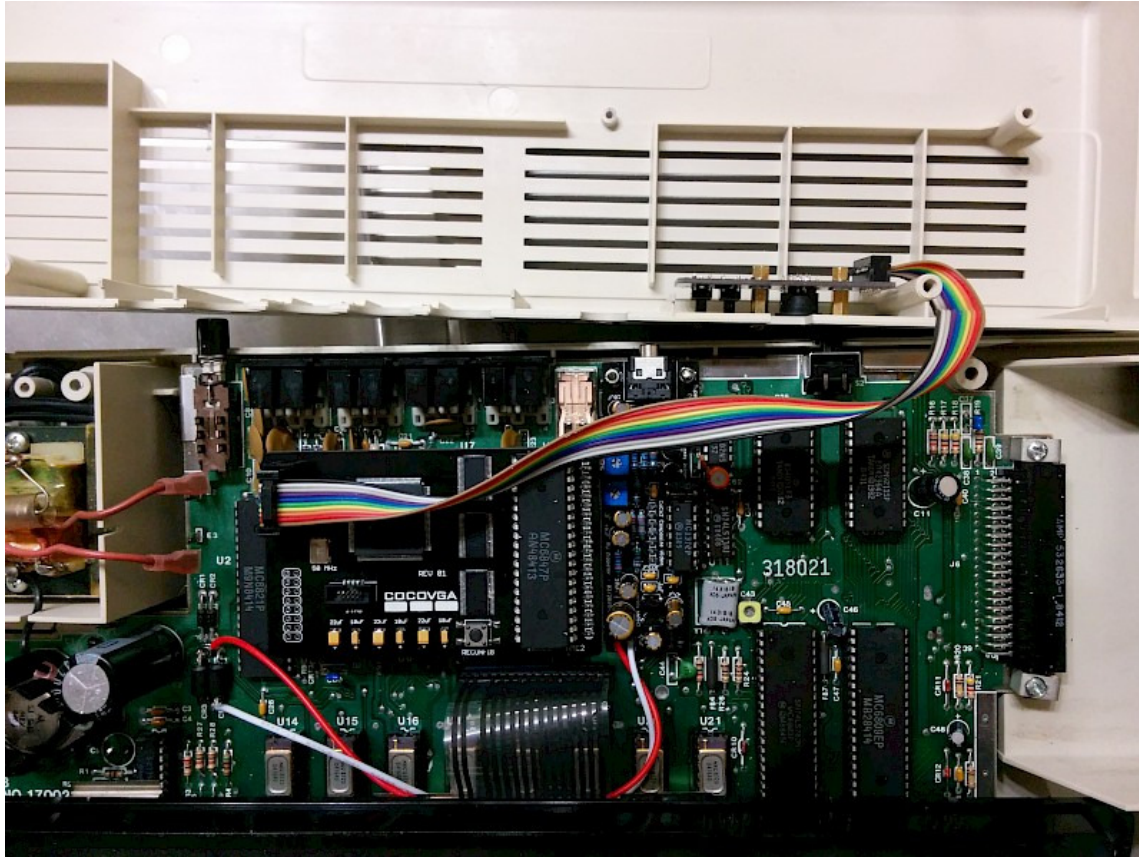
Using a screwdriver and pliers, attach the button board to the case using the included machine screws, standoffs, and nuts.



#### Step 5 - Connect the CoCoVGA button board

Connect the header connector from the ribbon cable to the CoCoVGA main board. The ribbon cable's connector is keyed and will only fit into the CoCoVGA main board header connector one way. Note that the system pictured has also had its RF modulator replaced with a composite board.





#### Step 6 - Close the case

Place the upper half of the CoCo 2 case on the lower half, being careful to avoid pinching the ribbon cable between case halves. Be especially wary of the cable being caught between screw posts - it is possible to inadvertently put a screw through the ribbon cable. Turn over the Color Computer and insert the 6 screws that were removed in step 1.

Once the case halves are screwed back together, turn the CoCo 2 back over on its base.

#### Step 7 - Connect the DIN cable

Reattach peripherals and connect the DIN cable between the button board and a VGA monitor.