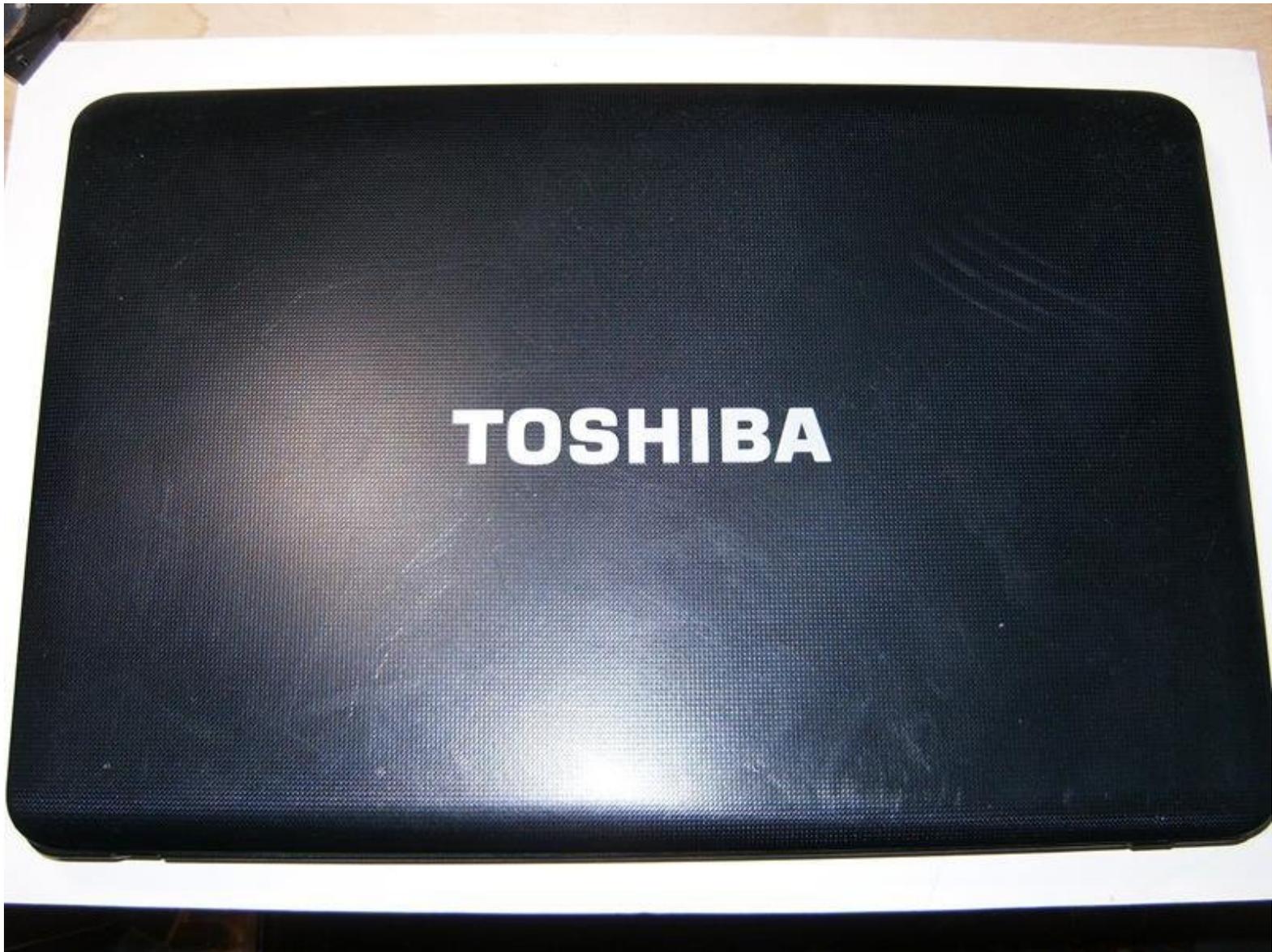




# Universal LCD driver Technique

Straight forward task with the right driver board. It is absolutely imperative to communicate the LCD panel model number with the vendor.

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## INTRODUCTION

Here is a Toshiba C655D-S5200 that had a broken case. It had severe water damage and the case was broken at the hinges. I salvaged as many parts as possible and wanted to use the LCD panel for a project. Over the last few years that I have been a member of iFixit, we had a couple of questions about what to do with spare panels. So, I figured I'd spend \$32 and purchase a LCD controller board and investigate how difficult it would be. The trickiest part was to find a controller board that matches the panel. The LCD panel in this Toshiba is a LTN156AT05-U09. I contacted a couple of vendors on Ebay and found one that was very responsive and accommodating. I ordered the controller board and it arrived in 2 weeks from China.

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### TOOLS:

- [Phillips #00 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)

### PARTS:

- [LCD controller board](#) (1)
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## Step 1 — Universal LCD driver Technique



- Here is the Toshiba with the water damage and a broken case.
- The LCD is in good shape and has no cracks.
  - Visible damage to the hinges that lifted the entire top case
  - Four rubber plugs covering some screws.
- Removing the plugs reveals the Phillips screws.

## Step 2



- Remove the one on the left bottom
- as well as the right bottom
- Here are the four M3x5mm screws

### Step 3



- Use a plastic opening tool, or similar to pop the bezel of the LCD assembly
- Continue to slide the tool all the way across the top
- Once the bezel has been released from the tabs, it can be further released by applying some gentle manual pulling

### Step 4



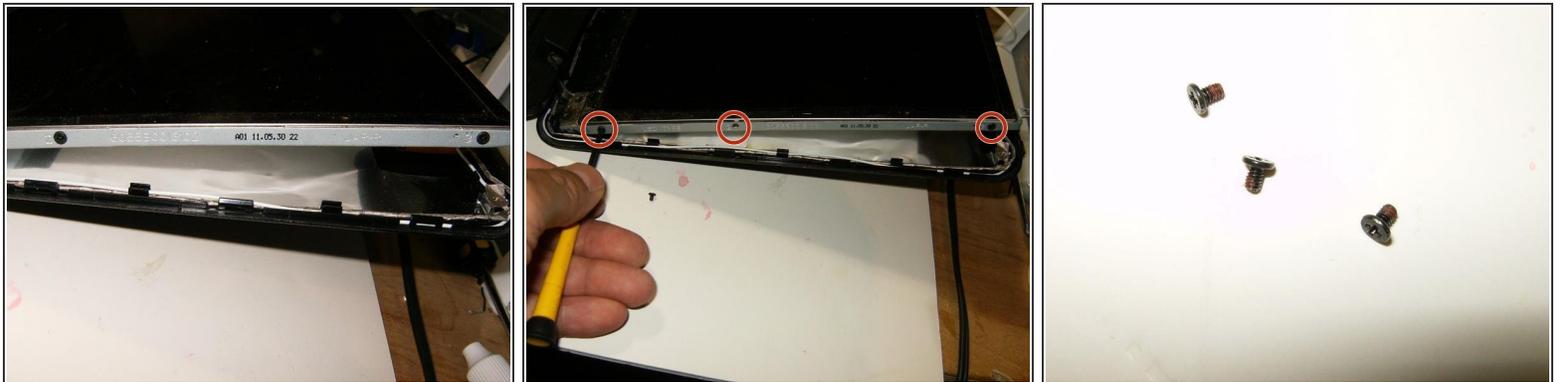
- Continue to pull on the sides
- and finally on the bottom.
- With all the tabs released the bezel can now be removed

## Step 5



- Here is the LCD assembly without the bezel
- Remove the Phillips screw that connects the LCD frame to the back cover. This is the left one
- Remove the right one as well

## Step 6



- The LCD can now be moved forward and away from the rear cover
- There are three screws on either side that hold the panel to the frame. Remove those
- Here are the three M2x4 screws

## Step 7



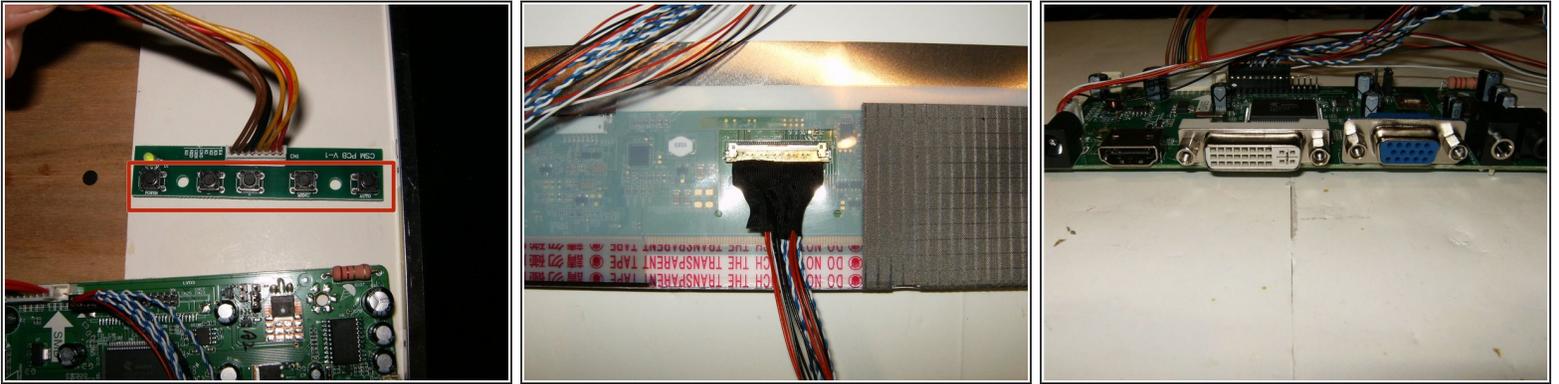
- Remove the three Phillips screws on the right side as well.
- with the screws removed the panel can now be moved out of the LCD frame. The LCD is still connected by the display cable.
- Here is the panel number clearly visible. this is an important number and needs to be noted.

## Step 8



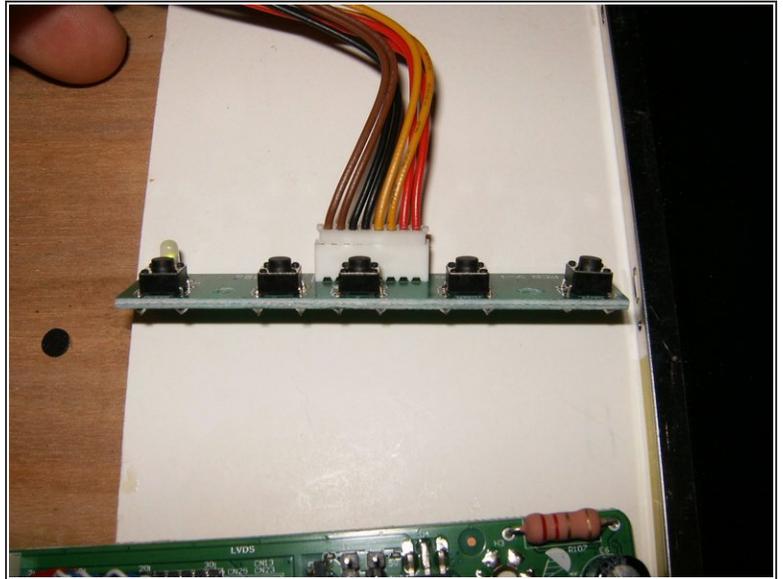
- Remove the display cable carefully. It is very thin and this particular one had some clear tape holding the cable to the panel. Remove it if it is present and disconnect the cable
- LCD panel all separated from the laptop.
- Here is the universal driver board. It also includes a separate PCB for the menu button. The cable is 40cm long and will allow for multiple choices for a custom case

## Step 9



- Here is the only shortcoming of this kit as far as I can see it. The menu buttons are on the same side as the cable connector, it will get in the way of placing it in a case. Some re-soldering may be necessary
- All it takes to connect the driver kit to the LCD panel is to plug it in. The connector is a perfect fit.
- This kit offers HDMI, DVI and VGA input. I opted for the VGA for testing purpose

## Step 10



- The LCD driver requires 12Volt to work, I used a spare 12V 1.4A switching power supply. the LCD fired right up and displayed a crisp image.
- Only shortcoming on this kit, the push buttons for the menus are in the same direction as the cable connector. Otherwise this kit definitely exceeded my expectation.

Now its time to think about a case for the monitor. Great little project for a rainy day and it does save another LCD panel from the landfill.