Waiter ECC

**Electronic Climate Controller
(MQTT)**

October 8, 2021

SOFTWARE UPDATE

As additional features are tested and become available, new units are shipped with the latest revisions to incorporate these latest features. You can see a list of revisions on our web site at:

https://waiterecc.com/waiter-ecc-software-updates/

In order for owners of older systems to gain access to these features, we offer several methods of updating your software.

1) The simplest and safest way to update is for you to return your system to us. Carefully wrap your control module and touchscreen, send them to us, we'll install the latest software in both units, test, and return your units to you. ($25)

2) If you're comfortable with disassembly the units, we'll send you a new controller chip and micro-SD memory chip.   You'll need to disassemble your units to install these. You keep the old chips. ($35)

IMPORTANT – Before starting, take a photo or write down your settings from the CONFIG screen. The new chips come with default configuration that may be different than yours.
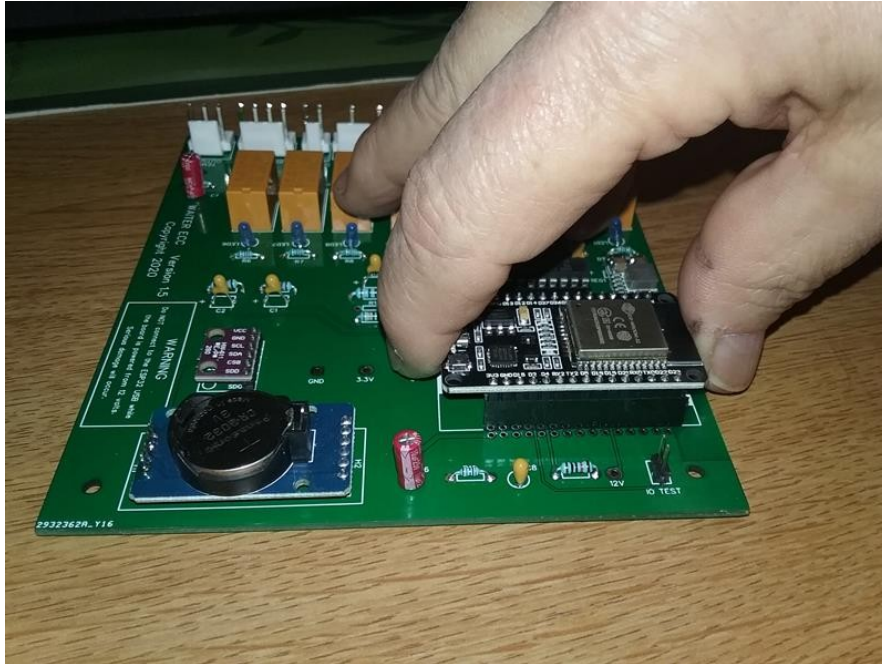
OWNERS OF EARLY MODEL UNITS - If your temperature sensors plug into the control module instead of the back of the touchscreen. You need to change the TEMP SOURCE setting to "1-0-0". This tells the computer the front and rear temperature sensors are plugged into the control module instead of the touchscreen.

You'll also need to set the Temperature Correction for the front and rear sensors, Usually +5 works in most cases

The following procedure is two parts, the micro controller chip in the control module, and the micro SD memory chip in the touchscreen.

Replacing ESP32 chip on controller board.

1) Remove he 12 volt power connector from the controller board. We cannot have any voltage on the board when replacing the chip.   NOTE: there's no need to completely unplug or remove the board from the enclosure. Just make sure there is no power on the board.
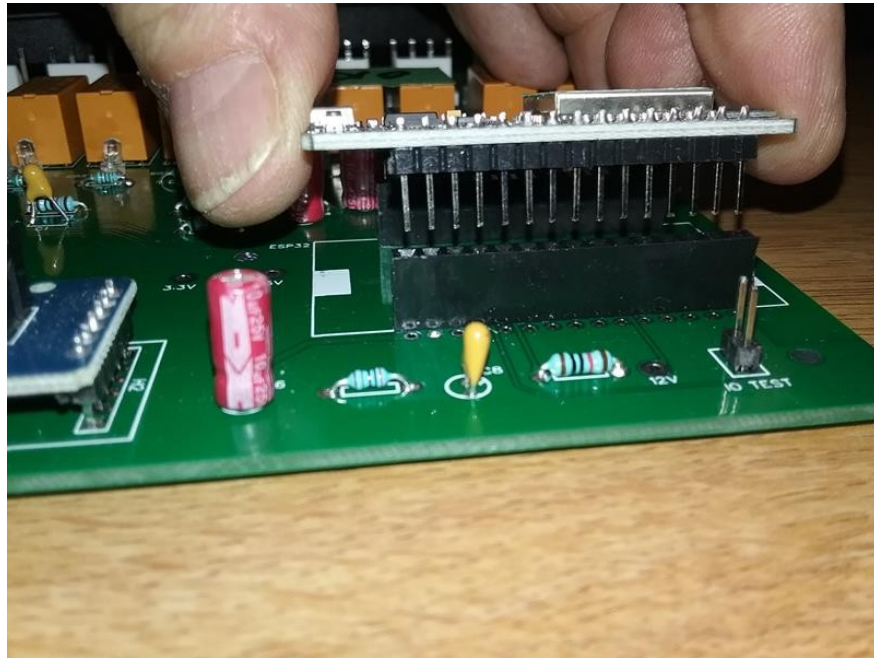

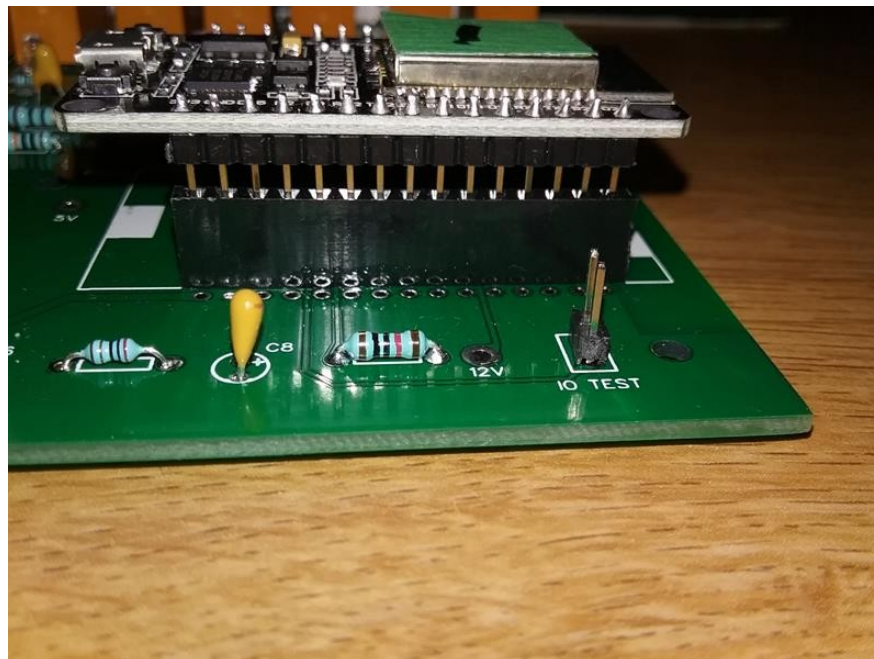2) Grasp the old chip by the ends and gently rock it back and forth as you pull straight up.

Install the new chip.

3) To ensure the chip isn't being installed backwards, use the micro USB connector as a guide, line it up with the USB connector thats printed on the circuit board. Its on the left side as shown in the photo.

4) Tilt the chip a little sideways to get the pins on one side started in the socket first. Don't press the chip into the socket yet. Verify that all the pins on that side of the chip lined up correctly with the socket.

5) To get the pins started on the other side, you may need to apply a light sideways pressure.

6) When all the pins are started in the socket, gently push the chip into the socket.

Replacing the Micro-SD memory chip in your Rpi touchscreen.

Replacing the touchscreen micro SD chip requires the case be removed. This can be very easy if you have a Rpi 3A, but is a little more difficult if you have the Rpi 3B or the Rpi 3B+. You can tell the difference between the Rpi models by looking on the back/side of the case.
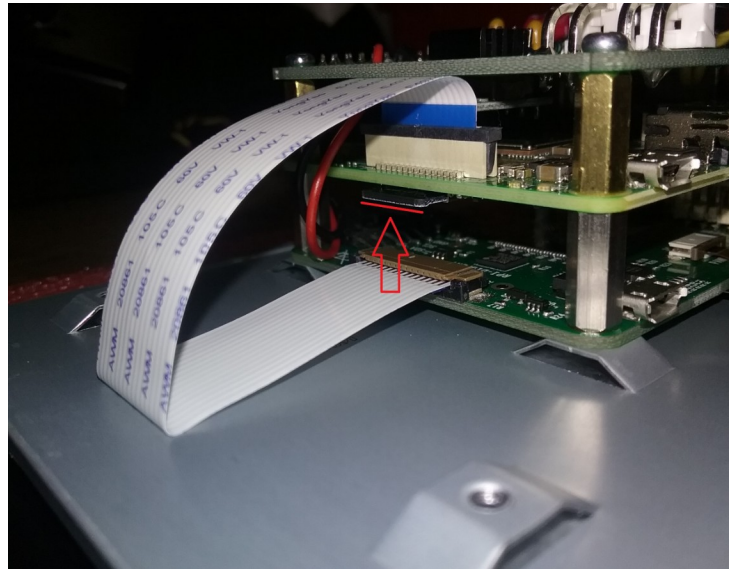
The 3B and 3B+ has four USB and one Ethernet receptacle on the side (same as photo) The 3A version doesn't have these and the side of the case will have a small cover plate to cover the empty holes where these connectors would normally protrude.

1) Place a towel on a flat working surface and place the touchscreen face down on the towel.

2) Pop the rear cover off of the case.

3) Remove the four screws on the back of the case.

4) If you have a Rpi 3A simply pull the case off. If you have a 3B or 3B+ its a little more difficult to get the USB ports to disengage from the case holes.

In the photo, hold the circuit card down and lift and slightly twist the case at the same time, The twisting should be in the CCW direction. This will disengage the HDMI and speaker receptacles on the top of the touchscreen.
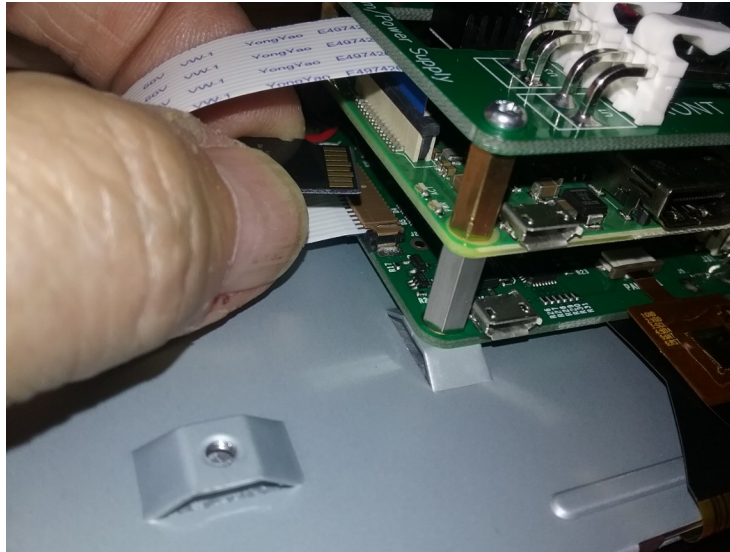
5) The Micro-SD card is located on the underside of the center circuit board, centered on the ribbon cable connector.

6) Reach between the ribbon cable with your thumb and finger. Gently rock the SD card back and forth as you pull it out.

INSTALL THE NEW SD CARD

Reverse order, verify the copper fingers on the SD card are facing up. The SD card holder is on the underside of the center circuit board, centered under the ribbon cable connector.

Gently push the SD card into its holder. No force is needed.

There is a YouTube video that shows how the memory chip is installed. This may help; Look at about minute 4:15

https://youtu.be/eKPiMRUO1yE

INSTALL THE CASE

If you have the 3A model, the case will position very easily and the screw holes will line up. The HDMI and speaker receptacles will push into their respective holes and the front of the touchscreen will fit into the indented groove.

If you have the 3B or 3B +; hold the case as shown in the photos, gently squeeze and push the case to sideways to get the USB and Ethernet receptacles into the holes. Sometimes it snaps into place and sometimes you need to work at it.

It helps to twist the case a little. Once it snaps into position, all the receptacles will be in their holes, the front of the touchscreen will be in its indented groove, and the screw holes will line up.

Install the 4 screws snugly.

Install the rear cover plate.

NOTE; First bootup with a new SD card can take up to 60 – 90 seconds. Don't panic. Give it time.