

Clock Installation

NOTE: when you install the unit into the dash, make sure that the temperature probe is standing vertical or at a right angle to the clock board so that the heat from the clock board does not affect the probe's temperature sensing.

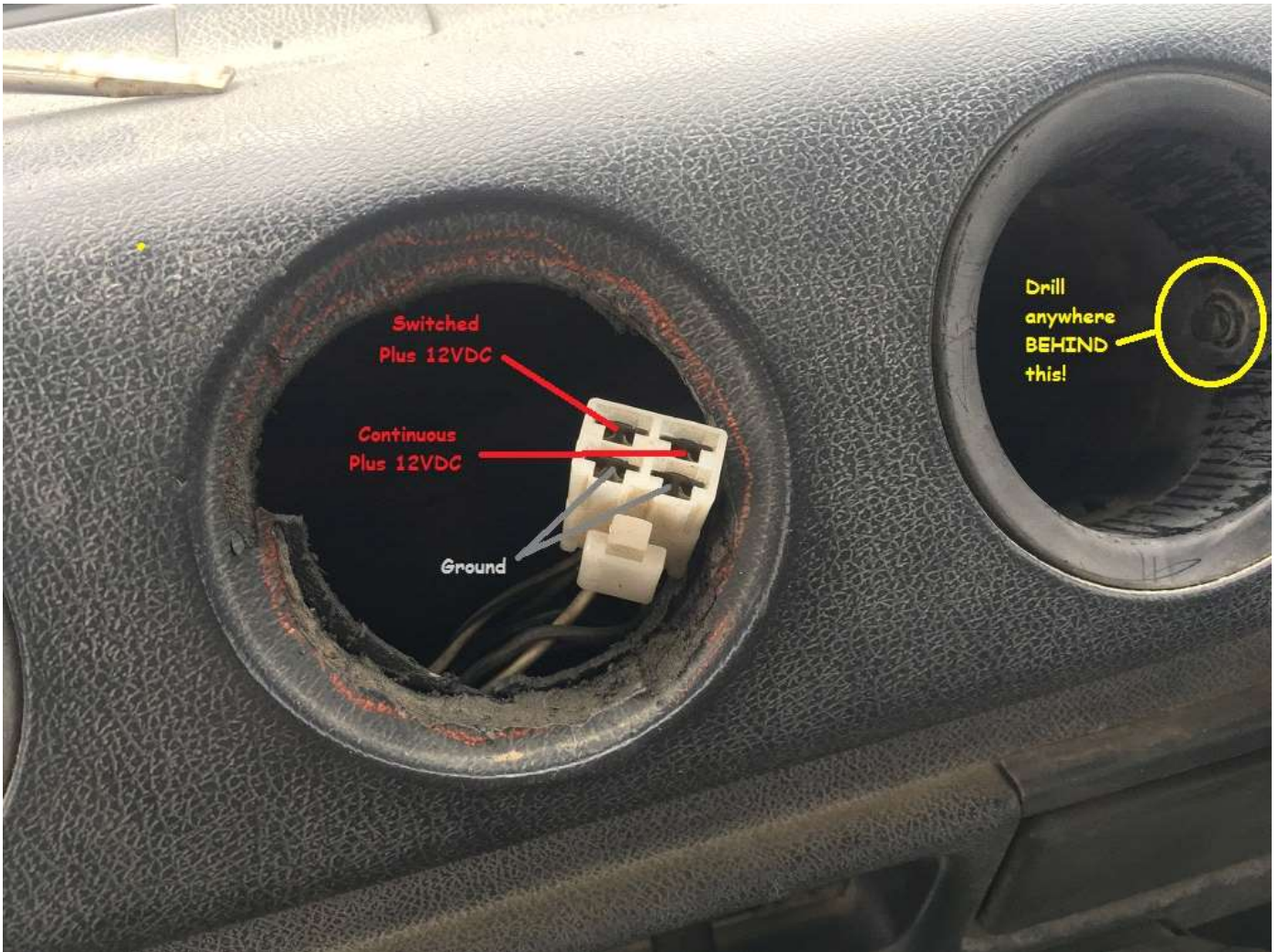
Install the clock on your dash by using the fresh air vent mount or by clearancing a hole in the center of the dash using the enclosed template where the factory clock would go.

Once you have determined where you are going to mount the clock, make sure that there is a path for the wiring to travel to the harness. It may be necessary to drill a hole in the ductwork for the wiring.

Wiring - Stock clock location

Ack's Samurai Dash Clock comes perwired to install in the Factory clock location in the center of the dashboard. There is a wiring harness connector located on the backside of the dash at that location. It has connectors for switched 12VDC for powering the clock.

This is what the mounting hole looks like once you make an opening for the clock:



(the yellow markings on the right apply to vent hole mounting instructions that follow.)

The connector is held in place with a wire strap that is wrapped around the harness. Use a flat-bade screwdriver to pry the strap off so that you can get to the connector as pictured above. Note that the hole you need to cut actually is the size of the inside diameter of the mounting space where it rises to the face of the dashboard.

Simply plug the positive spade connector attached to the red harness wire into the **upper left socket** and the negative spade connector attached to the black harness wire into the **lower right socket**. This connects the clock to ignition-switched power - the clock will

illuminate when the key is turned to the "Accessory" or "Run" position.

Wiring - Stock clock location

You must drill a hole in the side of the vent plenum BEHIND the two "nubs" (see picture, above) that would normally hold the rotating louvers in place. Drilling a hole on the near side of those "nubs" will prevent the clock assembly from securely seating in the vent hole.

The red wire on the clock harness is to be spliced into the ignition power wire (Black with a White tracer which can be found at the fuse box. Be careful not to break the feed of this wire to the rest of the vehicle!

The black wire can be connected to any metal part under the dashboard or to a black wire that terminates on a bolt attached to a metal part under the dashboard.

Suitable splice joints and connectorized wires are included with this kit for this process.

Mounting the clock (Center position)

Use the template (found on the last page of this document) to cut a hole in the center mount location.

Clean the attaching surface of all dirt, then attach the clock with "superglue" (not provided due to shipping rules) or a hot glue gun.

Hot glue is recommended as you can easily remove the clock by using a "Q-tip" soaked with denatured alcohol to release the hot glue adhesion.

Optional wiring tips for Center mounting the clock

If you wish to connect the USB charger port directly to an always-hot source of 12VDC, you can modify the harness to do so. Realize that the USB port will always be connected to the

battery and could flatten your battery if the vehicle is not used regularly...

Disconnect the USB wiring from the DC harness then solder two lengths of wires with 1/4 inch spade connectors to the ends. Connect these wires to the white connector (pictured above) as follows - red/positive to the **upper right socket connector** and ground/black to the **lower left socket connector**. This modification to the harness will provide a switched DC power feed to the clock and a continuous DC power feed to the USB charging port.

How to set Ack's Samurai Dash Clock.

Preparation

Before setting the clock, you should have a voltmeter or a multimeter set to Volts DC and a Centigrade/Celcius thermometer available in order to properly calibrate temperature and Voltage DC reading made by the clock module.

Determine the Centigrade/Celcius temperature in the area and write the temperature down.

Do the same with the meter at the battery terminals then write the voltage value down.

Connect the clock to 12 volts dc by inserting the power harness onto the two power pins so that the red wire connects to the pin in the corner. It has a tiny "+" printed on corner of the circuit board next to that pin. **DO NOT HOOK THE POWER CABLE UP BACKWARDS!**

Start the cycling display (if it is not already cycling) by pressing the right button.

Write down the temperature and voltage values displayed then compare them to the actual temperature and voltage you have previously written down. The positive or negative difference between these values are what you will enter later in the setup process described below.

Setting the clock

The following are the steps - in order - for setting the clock module:

The left button selects and ends a particular mode. The right button selects the setting.

The order of using the left button is as follows:

Set minutes

Press left button to enter the Set Minutes mode. Press the right button to select the minutes.

Set hours

Press left button to enter the Set Hour mode. Press the right button to select the hours.

Set day

Press left button to enter the Set Day mode. Press right button to select the day.

Set month

Press left button to enter the Set Month mode. Press right button to select the month

Set year

Press left button to enter Set Year mode. Press right button to select the year

Set Voltage function

Press the left button to enter the voltage calibration function. The display will flash and show the currently programmed error offset value - 0.0U. The display cannot generate the "V" (Volts) character so the letter "U" is used. Pressing the right button will cycle through a series of correction values from -0.5 volts to +0.5 volts starting with 0.0. Use the voltage offset value that you measured at the beginning of these instructions to set the error correction value. Press the right button until the value you obtained (or one closest to it) is displayed.

Set Temperature function (Temperature is displayed in degrees Centigrade)

Press the left button to enter the temperature calibration function. The display will flash "Ac:_0". Pressing the right button will display values between 0 to 5 or -1 to -5 indicating an offset between actual temperature and displayed temperature. Use the offset value obtained at the beginning of these instructions to enter the correct temperature offset value.

Set the display time-temperature-voltage display order function.

Press the left button. "dd: - 0" will appear. The number value indicates the order the time/date, temperature and voltage will (or will not) display. Valid values include:

"0" Time, Temperature and Volts

"1" Time and Volts

"2" Time and Temperature

"3" Temperature and volts

Set the display delay value function

Press the left button. "dF: _ 0" will display. The number will cycle from 1 to 9 indicating the number of seconds display a value before cycling to the next value.

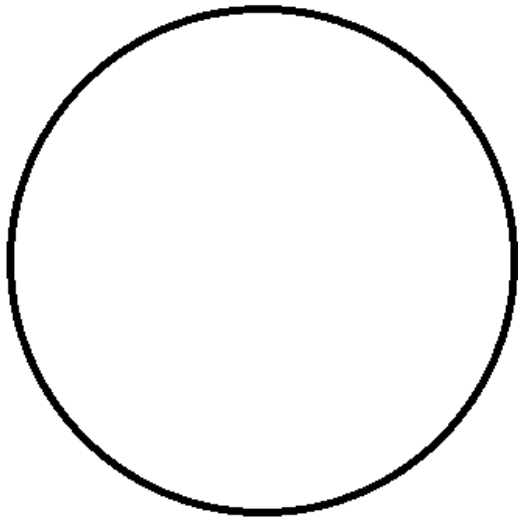
Set the display brightness function. **This does not actually seem to affect display brightness. You can press the left button twice to skip this setting.**

Set the Display Brightness

This setting actually causes the display to appear either be bright or slightly dimmer.

Press the left button. "AL:_0" will appear. This is the bright setting. Press the right button and the brightness setting will change to "AL _1" - the low light setting.

(Center hole template is on the next page)



Center dash mount hole template