Casio AQ-160 series watch
Tide & Moon mod

(by siealex and Transhuman from forum.watch.ru)

About the mod

This mod allows you to convert module **3319** of your Casio **AQ-160** watch to module **3320**, thus removing the world time function but adding the tide graph and moon calendar features, making it similar to earlier **AQ** models. We are not responsible for any damage caused by this mod.
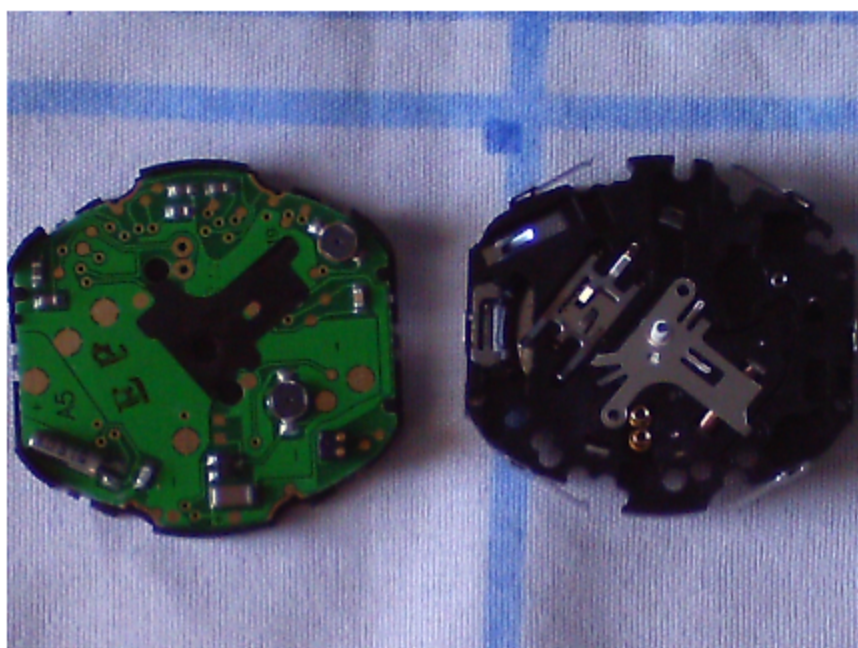
Part A. Disassembly

1. Remove the case back
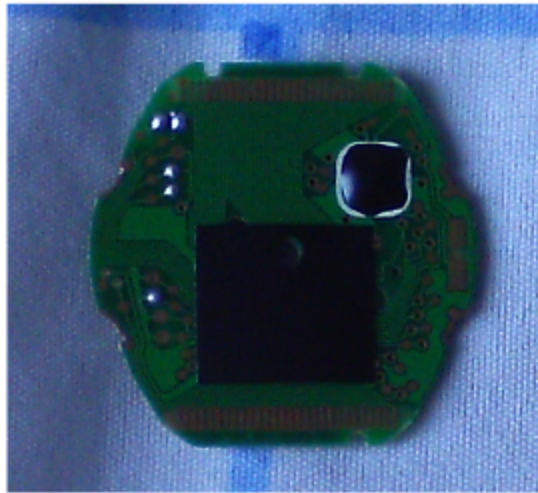

2. Extract the module

3. Remove hands carefully. Keeping display upside release **6** metal latches and take the module apart (be sure not to lose golden springs)

Now you need the left part. It consists of **PCB**, display, **EL** and housing.

4. Carefully separate the **PCB** from the housing. Be sure not to lose contact rubber stripes for display and **EL.** Turn the **PCB** upside down to see the side covered with square black tape. **Ready** to mod.
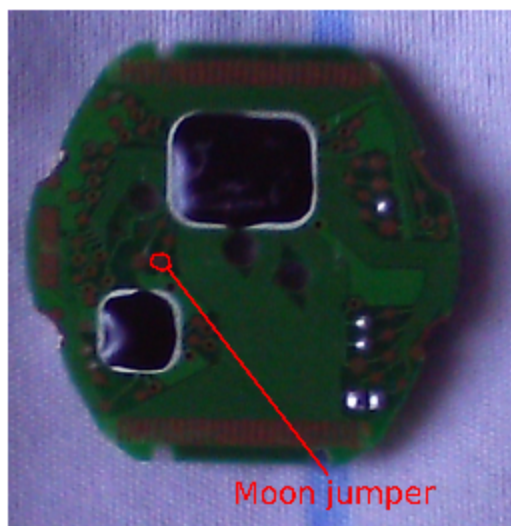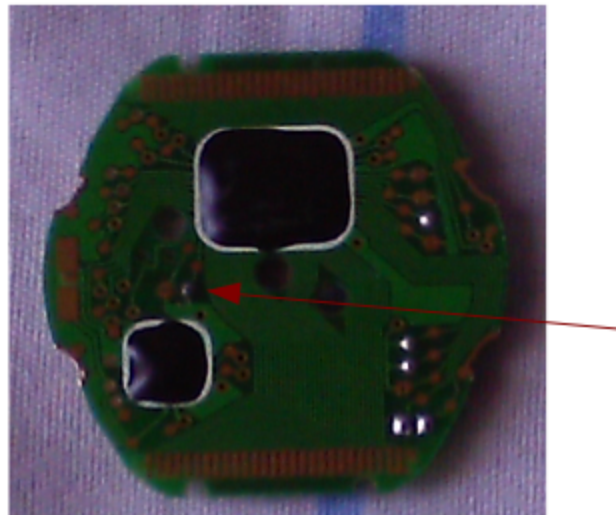

Part B. Modding

Main and the biggest step. **Remove** the tape and place the **PCB** like this:

Locate the right jumper (two unsoldered hemicirle contacts) between smaller and bigger chip:

Moon jumper

Now just solder these right jumper contacts carefully:

And your **PCB** is ready to be installed back.

Part C. Assembly and testing

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1. Revert the steps of part **A** to assemble the module. Don't put it in the case yet. If needed, contact **AC** with battery as required on the module. After you assemble the module, you should notice the tide graph in time-keeping mode or after pressing the Mode button:

2. Now you need to test and reposition the hands. To test the hands, go to **H-SET** mode (press Mode 5 times), hold **Adjust** and then get the hands running free by holding **Search** button and pressing **Light**. If the hands move freely (as usual while using **H-SET** mode) then everything is **OK** and it's time to reposition them precisely. To do this you can set them by your fingers to any position you want, e.g. **6** o'clock. You may need to put the module in and out of the case to ensure hands match the marks on the dial properly.

3. Clean the display if needed (try not to touch the hands if you don't want to reposition them again) and install the module back into the case. Screw back the caseback and your watch is ready to use.

Part D. Results and issues

1. This mod definitely converts your **AQ-160** watch module **3319** to **3320**, so you need the **3320** module manual to adjust and operate your modded watch. The main added features are tide graph and moon calendar mode (no moonphase indication in time-keeping mode because moon phase display is absent physically):

2. The time-keeping mode dot-matrix information scrolling behavior is generally undefined and depends on the firmware version your exact watch has.

On some modded **AQ-160** watches, if you press the Search button in The time-keeping mode, it will scroll through:
Tide graph — Day of week — Date.
On other modded **AQ-160** watches, it will scroll through:
Day of week — Date — Current time — Current seconds.

3. Due to physical difference between **3319** and original **3320** module there are some (non-critical) limitations of the modded version:
- no moon phase display;
- shorter tide graph display;
- glitched «+» character on the **GMT** setting screen;
- glitched «W» character on the longitude setting screen.

Happy modding! Explore Casio with us and enjoy!