

# Board Carrier

## Operation Instructions

### Getting Started

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Your new BOARD CARRIER will be very easy to use, once you understand how to mount the TEMPROBES and position the PCB. This page includes basic instructions, as well as a number of ways to customize your CARRIER.

### Mounting TEMPROBES

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You can mount up to three TEMPROBES on each end of the CARRIER. There are two ways to mount your TEMPROBES. You can either...

- Remove the clamps and mount the TEMPROBE ball joints on the 6-32 screws on the CARRIER. Be sure to use the self-locking nut and the two conical spring washers to provide clearance. This method minimizes thermal mass.
- Clamp TEMPROBES directly onto the BOARD CARRIER, after removing the 6-32 screws. This method allows TEMPROBES to be more easily removed from the CARRIER and clamped directly to a PCB.

### Positioning the PCB support arms

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The PCB is supported in the groove of the small gripping spools on the end of each of the four support arms. The arms can be mounted on any of the studs along the two side rails.



To determine the best location for the arms, center the CARRIER over the PCB. Move the arms to the studs which will locate the grippers near the ends of the PCB. This will provide the greatest stability. Firmly tighten the self-locking nuts on the two non spring-loaded arms to lock these arms in place.

Assemble the pivoting arms by hooking one leg of the spring into the hole in the arm and placing the other leg inside the adjacent stud on the rail. Then place the aluminum spool in the coil of the spring, and screw it down on the pivot stud until it produces a very slight drag on the arm as it pivots.

## **Mounting the PCB**

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- 1) Swing the two pivoting arms towards the side rail against the force of the springs.
- 2) Fit one edge of the PCB into the grooves of the gripping spools on the fixed arms.
- 3) Then slowly release the spring-loaded arms while fitting the edge of the PCB into their gripping spools.

## **Positioning the TEMPROBE sensors**

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- Pivot the ball joint and slide the thermocouple assembly as required to position the sensor tip.
- Pre-load the tip and lock it into place.

## **Removing the PCB**

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### **Caution: Allow the CARRIER to cool before handling!**

- 1) Lay the CARRIER on a bench and release the TEMPROBE ball-joint locking levers.
- 2) Pivot the spring-loaded CARRIER arms away from the PCB, leaving the PCB on the bench.

## **Customizing Your BOARD CARRIER**

### **Supporting PCBs Above the CARRIER**

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- Certain applications may require supporting the PCB above the CARRIER, rather than below. In this case, the supporting arms can be inverted so that the gripping spools face up, rather than down.

### **Raising or Lowering the PCB Even Further**

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- The PCB can be supported even higher above (or further below) the CARRIER by replacing the 6-32 x 5/8 in flat head screws that hold the gripping spools with longer screws. You can also place nuts under the spools to act as spacers.

### **Shortening the CARRIER**

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- The CARRIER frame can be shortened by moving the end that does not have the logo in to another set of studs.

### **Material Considerations**

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- The Standard and Large BOARD CARRIERS are made out of anodized aluminum. These BOARD CARRIERS should not be immersed in solder. The Wave BOARD CARRIER is constructed of hard anodized aluminum; it is safe to use in a wave solder environment.