

Sensor Box Project – Overall Production Plan

Machining, Electrical Preparation, and Mechanical Assembly

Batch Size: _____

Start Date: _____

End Date: _____

1. Machining (Stainless Steel)

- ☐ Mill stainless steel back plates to final length
- ☐ Drill 4 holes per plate for solar panel bracket
- ☐ Tap 4 holes per plate for stainless steel cross members
- ☐ Drill 2 mounting holes per solar panel bracket (for 50 brackets)
- ☐ Drill holes in box for sensors and the solar shield

2. Electrical Preparation

- ☐ Solder 50 headers for RTC modules
- ☐ Solder 50 headers for SD modules
- ☐ Solder 50 headers for ADC modules
- ☐ Solder header pins for Arduino boards
- ☐ Solder peripheral components on PCB (resistors, MOSFETs)
- ☐ Solder female receiver headers
- ☐ Solder screw terminals
- ☐ Connect and test all sensors (sound, temperature/humidity, etc.)

3. Mechanical Assembly

- ☐ Assemble internal and external brackets and standoffs
- ☐ Mount PCB and sensors securely in each enclosure
- ☐ Apply silicone, Loctite, and fix fasteners as required
- ☐ Perform shake test and visual confirmation
- ☐ Verify all sensor cables are neatly routed and secured

Final Approval: _____

Supervisor Initials: _____