## Soontech Annals

# LC09: Tiny Request Manager

By: Basil, Heilz, Skyzy

Tags: logic-and-computation, request-manager

### **Features**

- Random input proof
- Infinitely expandable
- Pausable
- Compact. 8x4x5 volume.

## **Applications**

• Safely queueing processes in a system.

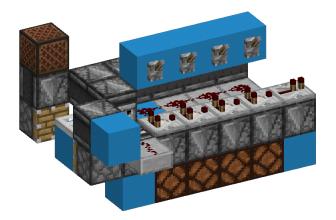


Figure 1: Tiny Request Manager

## **General Description**

The LC09 Tiny Request Manager is a device that can be used to queue requests in a system. It ensures that only one request is processed at a time regardless of random request timings. The device is infinitely expandable and can be paused. Note: Reset input is not rapid input proof.

# **Device Specifications**

Table 1: Inputs

| Name             | Range | Description  |
|------------------|-------|--|
| Task Enables 1-4 | 0-1   | Requests output for a task.  |
| Reset            | Pulse | Resets the device to process the next request. Not rapid input proof. 10gt between triggers. |
| Pause            | 0-1   | Pauses the device.   |

### Table 2: Outputs

| Name   | Range | Description |
|--------|-------|-------------|
| Output | Pulse | Outputs     |

### Table 3: Device Specifications

| Parameter  | Min. | Typ.      | Max. | Unit   | Conditions                                |
|------------|------|-----------|------|--------|---|
| Throughput | 10   | -         | -    | gt     | Normal Usage                              |
| Latency    | 16   | -         | -    | gt     | From lever input to torch depowering.     |
| MC Version | 1.13 | 1.21.4    | -    | MCV    | Latest version at time of writing: 1.21.4 |
| Dimensions |      | 8 x 4 x 5 |      | Blocks |   |

# **Testing Data**

Table 4: Executed Tests

| Test              | Result  |  |
|-------------------|---|--|
| Throughput test   | Device was able to function with 10gt clocked input. Note: levers must not go from all off to on while clocking. Invalid toggle-state position was observed in this case. |  |
| Random input test | Device was able to process requests correctly with random lever inputs.   |  |

## **Download Information**

Table 5: Download Information

| Identifier | MC     | File                                       | Description                                   |
|------------|--------|--|---|
| LC09       | 1.21.4 | LC09_Tiny_Request_Manager.litematic        | Schematic of device. Includes three variants. |
| LC09B      | 1.19.3 | LC09_Tiny_Request_Manager_1.19.3.litematic | Schematic of device for older versions.       |