Tool Tutorial
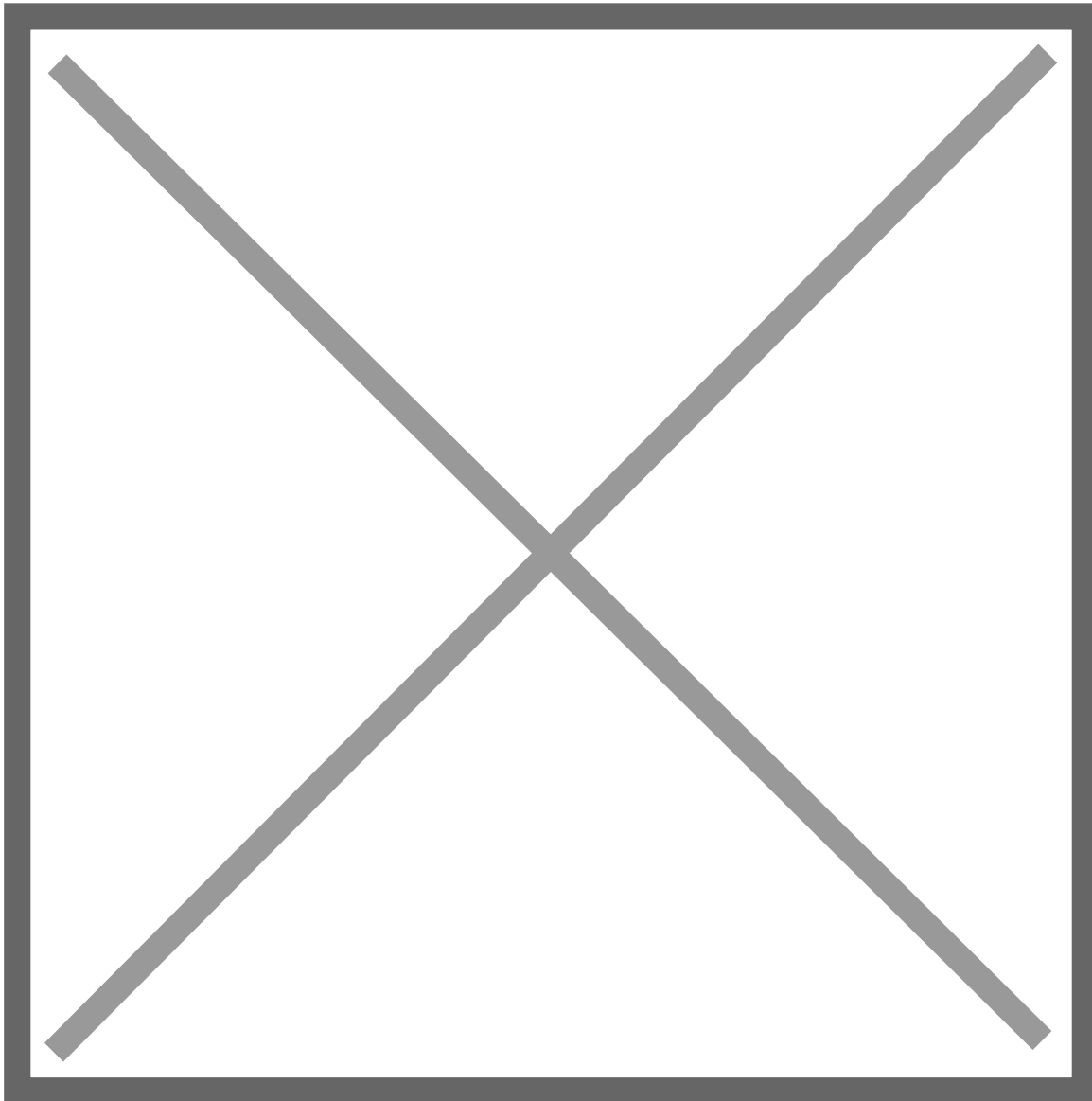
(Link to PDF Tool Tutorial)

Tool anatomy

1. Controller 2. Breaker switches 3. Alarm lights 4. Temperature probe 5. Latches 6. Viewing port

To do

- open & inspect electronics panel for safety
- order & install alarm buzzer-lights
- apply a better door seal

4/18 "does it work" test

T value = time until next step

Step	Set Temp (°F)	T value	Check time	Check temp	Notes
1	80	15	10:33	75	
2	300	15	10:48	295	213°/15min = ~14°/min
3	0	-121	11:03	265	it definitely works

4/18 "is there an alarm buzzer" test

- AL1: Set ALM1 to 1000°
- AL2: Set Hy-2 to 10°

Asked the kiln to try to ramp to 2k° in 15 minutes. The alarm relays are firing, but no alarm light or buzzer sounds, so we need to get one (or two).

Step	Temp (°F)	T value	Check time	Check temp	Notes
1	80	15	step skipped		
2	300	15	11:40	300	AL2 light on, no buzzer
3	2000	180	12:00	550	proceeding to "can we get to 2k" test
			12:03	600	
			12:07	661	
			12:15	766	
			12:21	839	
			12:27	896	
			12:34	958	
			12:54	1099	AL1 light on, no buzzer

Step	Temp (˚F)	T value	Check time	Check temp	Notes
			1:25	1250	
			1:35	1284	
			1:47	1331	
			2:09	1386	
			2:11	1400	
			2:32	1454	
			2:51	1492	
			3:45	~1570	hovering around here, jumping rapidly up and down. the area around the kiln is warm. this is about the functional limit of this configuration.
4	80	-121			

Forge curing schedule

There's a forge which has been lined but needs to be heat-cured.

Step	Temp (˚F)	T value	Notes
1	100	60	ramping up 100˚/hr
2	200	60	
3	300	60	
4	400	60	
5	500	60	
6	600	60	
7	700	60	
8	800	60	
9	900	60	
10	1000	60	
11	1100	60	

Step	Temp (˚F)	T value	Notes
12	1200	30	holding for 1/2 hour for 1/2" of material
13	80	-121	stop

The official kast-o-lite packet says to ramp down 100˚ per hour, but people online seem to skip this step.

Temperature test notes

Temperature	Time
250F	T=0
1500F	T+45min
1750F	T+70min
2000F	T+140min
Ramp down to 1500F	+15 mins

misc notes

- it's possible to store several simple programs; there are 30 steps total
- it's possible to set a schedule which is impossible for the machine to achieve
- telling people in plain english how to set alarms for each type of project is important
- the alarms don't stop anything and are not a safety feature so much as an alert
- it's possible to observe and change the schedule while it's in progress

To set a single temperature:

1. press A/M. Display should show C-1
2. use up/down arrows to set first digit, then press A/M to move on to next digit. Repeat until last digit is set
3. Don't touch anything; wait a few seconds and it should start heating.