

Machine Access Control Boxes

Update: October 26 2022

Prototype units remain in production essentially trouble-free. There was one failure, a solid state relay. Replaced and the unit returned to service. MOV's were added to protect the SSR's. There have been a couple of power outages that required the control boxes to be reset (unplugged and then plugged back in). 5 Production prototypes are have been constructed, built on circuit boards revised based on prototype testing. These boxes were deployed and tested successfully. They could become part of the production deployment.

The circuit board was modified to accommodate either a Raspberry Pi or an Onion Omega2+. Current Raspberry Pi availability is essentially zero. Onion Omega's are readily available at half the price of Pi's. Suggest using Omega's (Control program has been modified and successfully tested on the Omega's.)

iOS app was finally approved as a public unlisted app in the apple store. It was successfully tested. Android and PC versions are complete and have been ready for some time..

Machine Access Control Boxes			
10/2021 Approved Budget	Spent	% Budget Spent	% Project Completion
\$3,900.00	\$0.00	0%	35%

Issues for the Board to Review/Resolve.

- Does the board feel that these controls are still needed?
- Database of Authorized Red Tool Users and their password (10 digit ID number)
- Should units be deployed with Override buttons? (I assume no.)
- Should units be hard wired or have plug receptacles? Plugs make power disconnection for maintenance easy, but also allow bypass of the control box by plugging the machine into the wall.
- Potential bottleneck: Creation and location of Authorized Users Data Base. I know some work is in progress. I will need access to the data in order for the control boxes to auto update and accept current and newly authorized users.

Current deployment schedule:

Leesburg 8 machines

Table Saw, Planer, Jointer, Miter, Laser, UV Printer, Big Red, Tormach,

Purcellville 15 machines

Big sander, planer, jointer, table saw, EBF, Miter Saw, Lathe, Gorton, Surface Grinder, Mig, Mig, Mig Hobart (110V), Tig, Plasma, Big Blast Cabinet.