

1

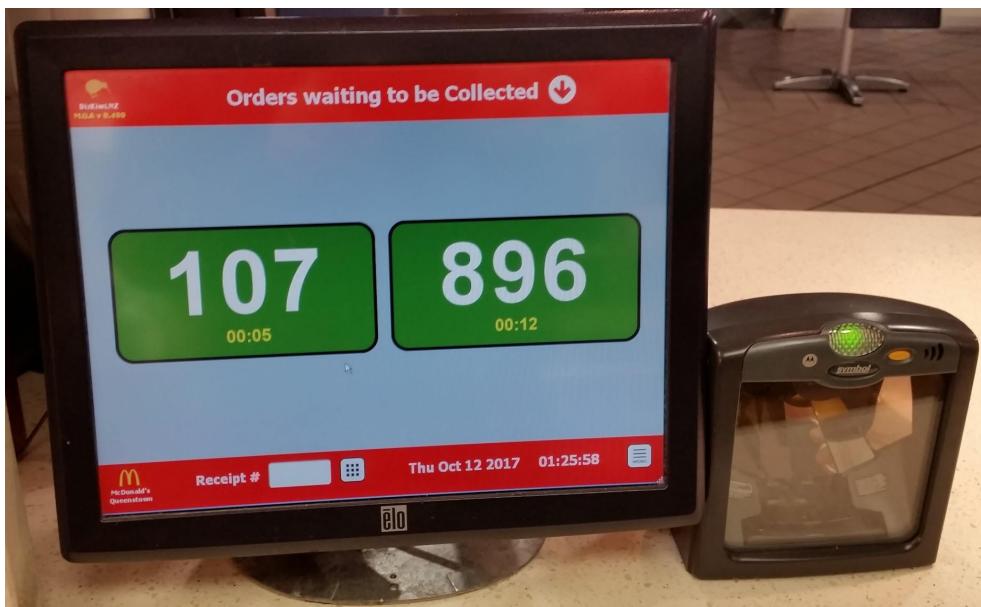
# OLD WAY TO SERVE AN ORDER...

**Customer  
Order is  
Ready**



**Employee  
Presses  
SERVE  
Button**

**A Pick Slip  
Prints from  
the Printer**



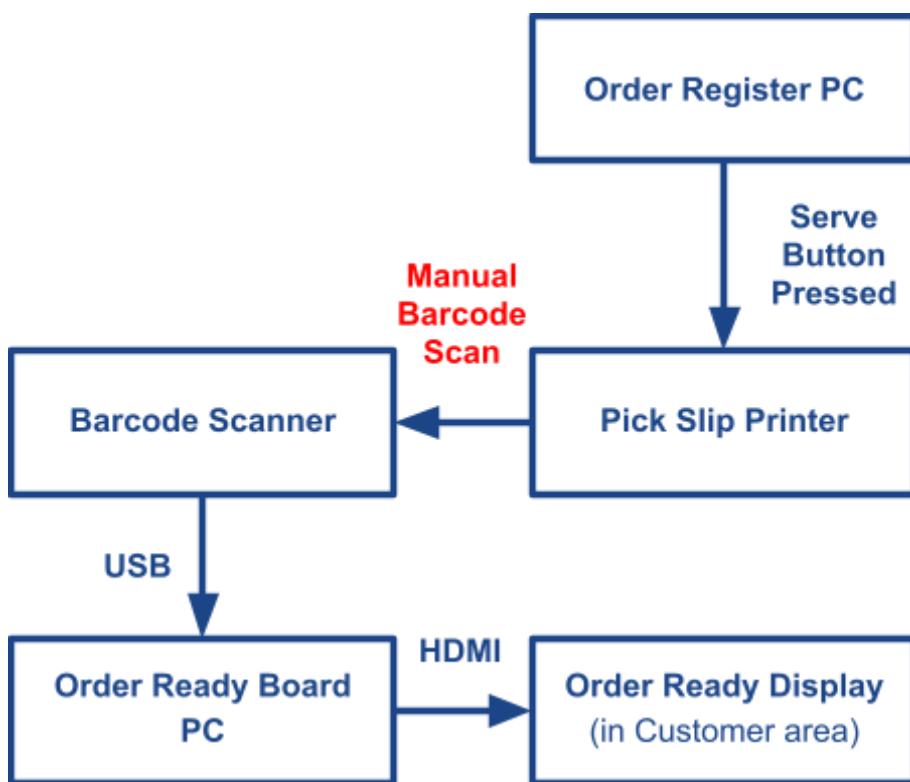
**Employee needs to  
MANUALLY SCAN  
the Printed Barcode**

**Order Number Then  
Appears on Large  
Display in Customer  
Area. Customer Sees  
Order is  
Ready to Collect**



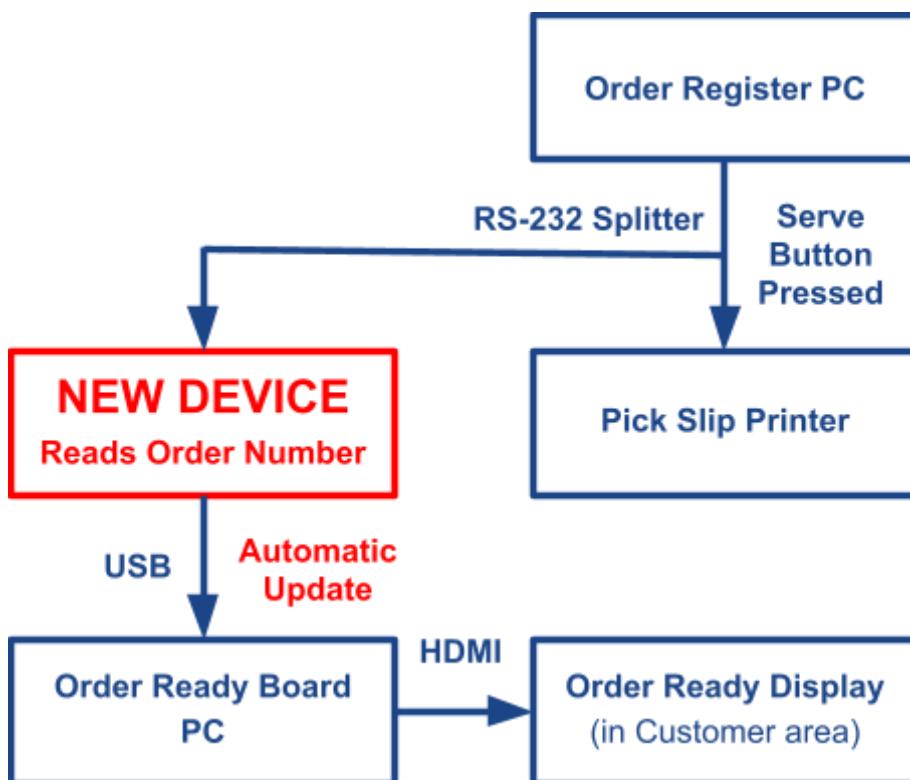
2

## HOW THE OLD SYSTEM WORKS ...



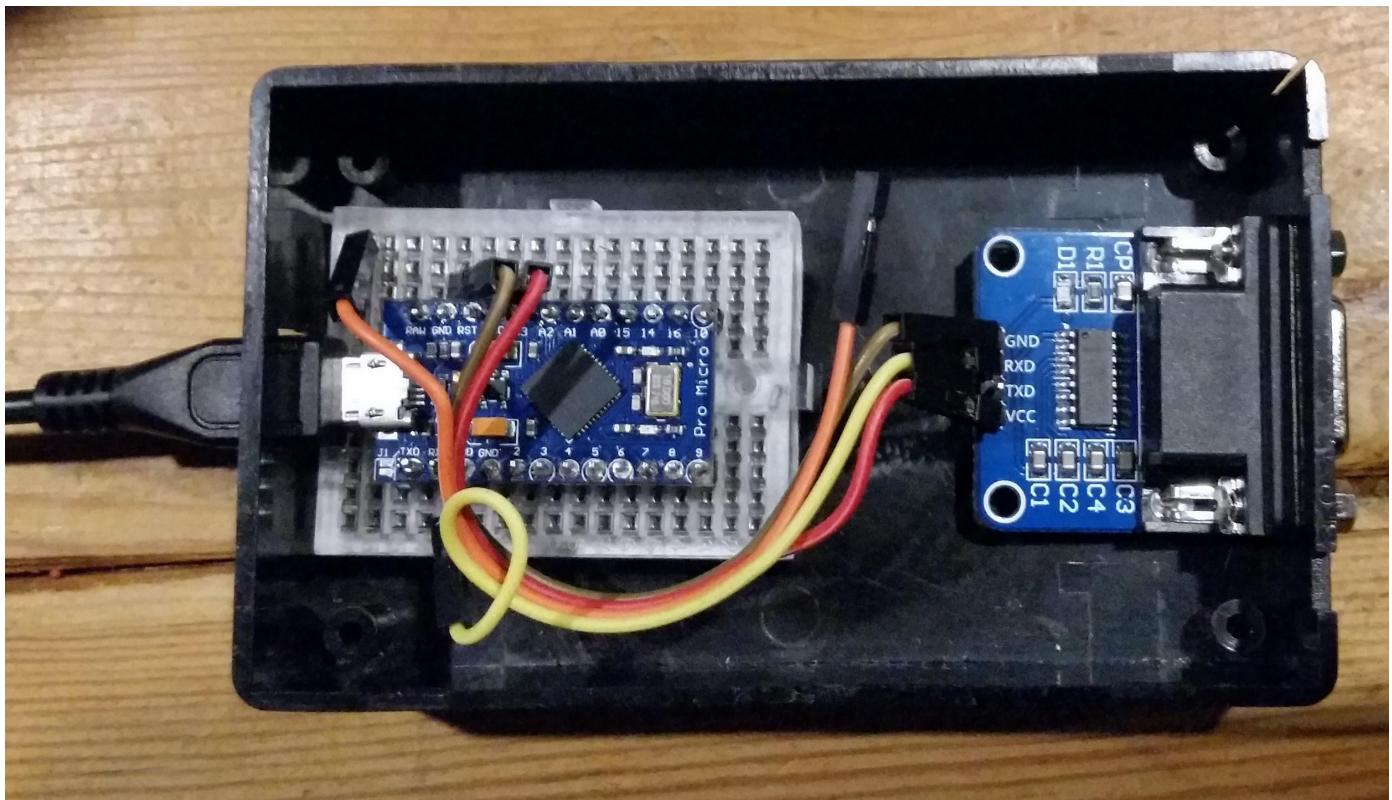
3

## THE NEW IMPROVED SYSTEM ...



# LET'S BUILD SOME PROTOTYPES !

Make a series of proof of concept prototypes  
with the Arduino Pro Micro microcontroller ...



5

# NEW FASTER WAY TO SERVE ...

Customer  
Order is  
Ready



Employee  
Presses  
**SERVE**  
Button

A Pick Slip  
Prints from  
the Printer

**THE NEW DEVICE**  
Reads Order Number from the  
Pick Slip Printer Data Stream  
then Emulates a Barcode Scanner



Order Number Then  
Appears on Large  
Screen in Customer  
Area. Customer  
Sees Order is  
Ready to Collect



**THE RESULT?**  
**Customers**  
**Receive Orders**  
**~ 2-6 Seconds**  
**FASTER!**

# HOW TO IMPROVE MORE ...

- ◆ Circuit Isolation on PCB
- ◆ Voltage Regulator on PCB
- ◆ Surge and Overcurrent Protection
- ◆ Larger LCD Display
  - e.g. replace 8x2 with 12x2 char LCD
- ◆ Realtime Clock (RTC)
- ◆ Network Time Server (NTP) connectivity
- ◆ Power-over-Ethernet (PoE)
- ◆ WiFi connectivity
  - e.g. ESP32 or ESP8266
- ◆ Bluetooth connectivity
- ◆ Multiple RS-232 Channels
- ◆ Piezoelectric Transducer / Buzzer
- ◆ Solid State Relay
  - e.g. activate flashing lights
- ◆ Enclosure Waterproofing
- ◆ Put all components on one PCB