

Alternative Technology for Amish

Challenge: Calculate a specific four-digit voice pick code to print onto a label with limited technology.

Solution: A “black box” containing an Arduino board and Zebra Keyboard Display Unit.

Story: A produce distributor works with the local Amish population to sell their produce. The distributor recently approached the team at EMP Technical Group with a unique application.



The distributor was migrating to voice-pick on their products. This would require every incoming pallet to have a label with a four-digit voice-pick code. This code is calculated using three different inputs (GTIN, Lot Code, and Date Code).

On the surface, this is a simple application; however the Amish abstain from the use of computers and technology. The engineers at EMP had to design a solution that would quickly generate the voice pick code from three inputs and send it to the printer without the use of “technology.” The team at EMP used their programming knowledge along with their knowledge of Zebra products to design the printer, “black box”, keyboard solution.



The black box, the “brains”, contains an Arduino board communicates back and forth between the keyboard and the Zebra printer. The keyboard being used is a Zebra Keyboard Display Unit (ZKDU), a unique keyboard with a two-line display. This display prompts the user for the GTIN number, Lot Code, and Date Code. As each prompt arrives, the operator types in the correct code. After the “black box” receives all three codes, it utilizes the custom EMP program to generate the voice pick code. This code is then sent to the printer and a label is printed to be placed on a pallet.

The produce distributor now receives all their product with the correct voice pick code, and the Amish producers can save time and print the correct voice pick code without “using technology”.

Do you have an out-of-the-box application? Contact EMP today!