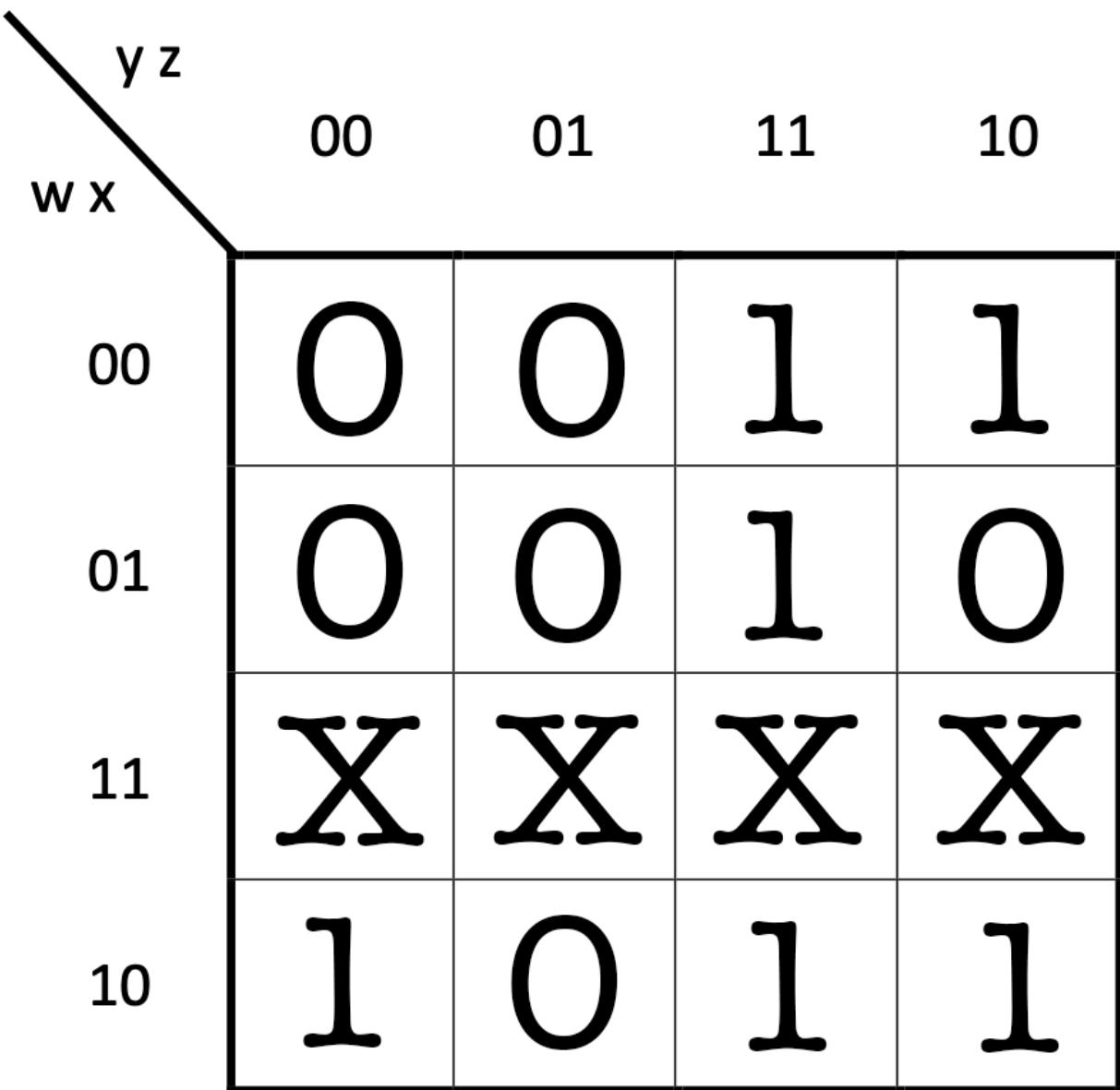
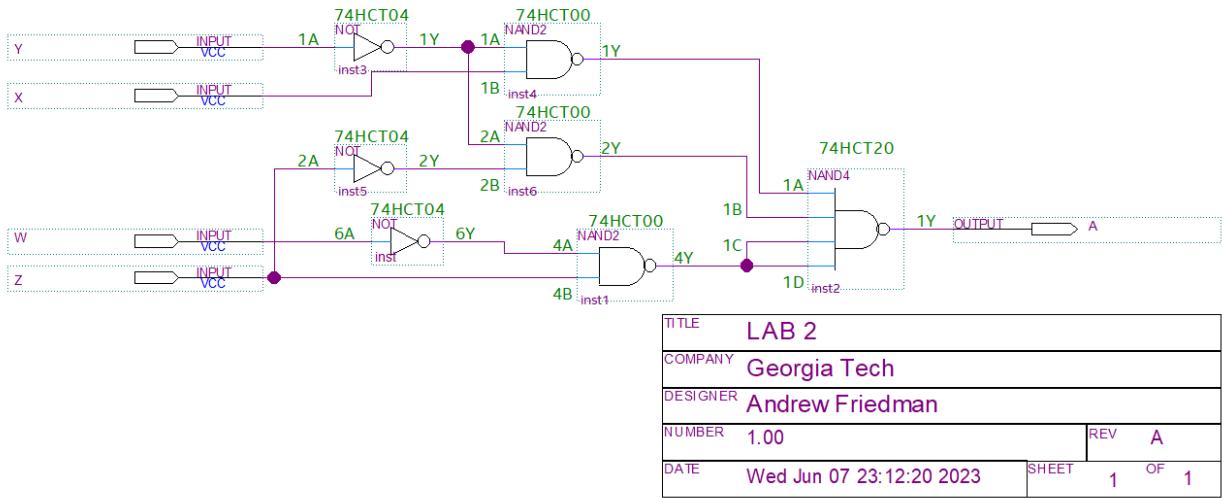


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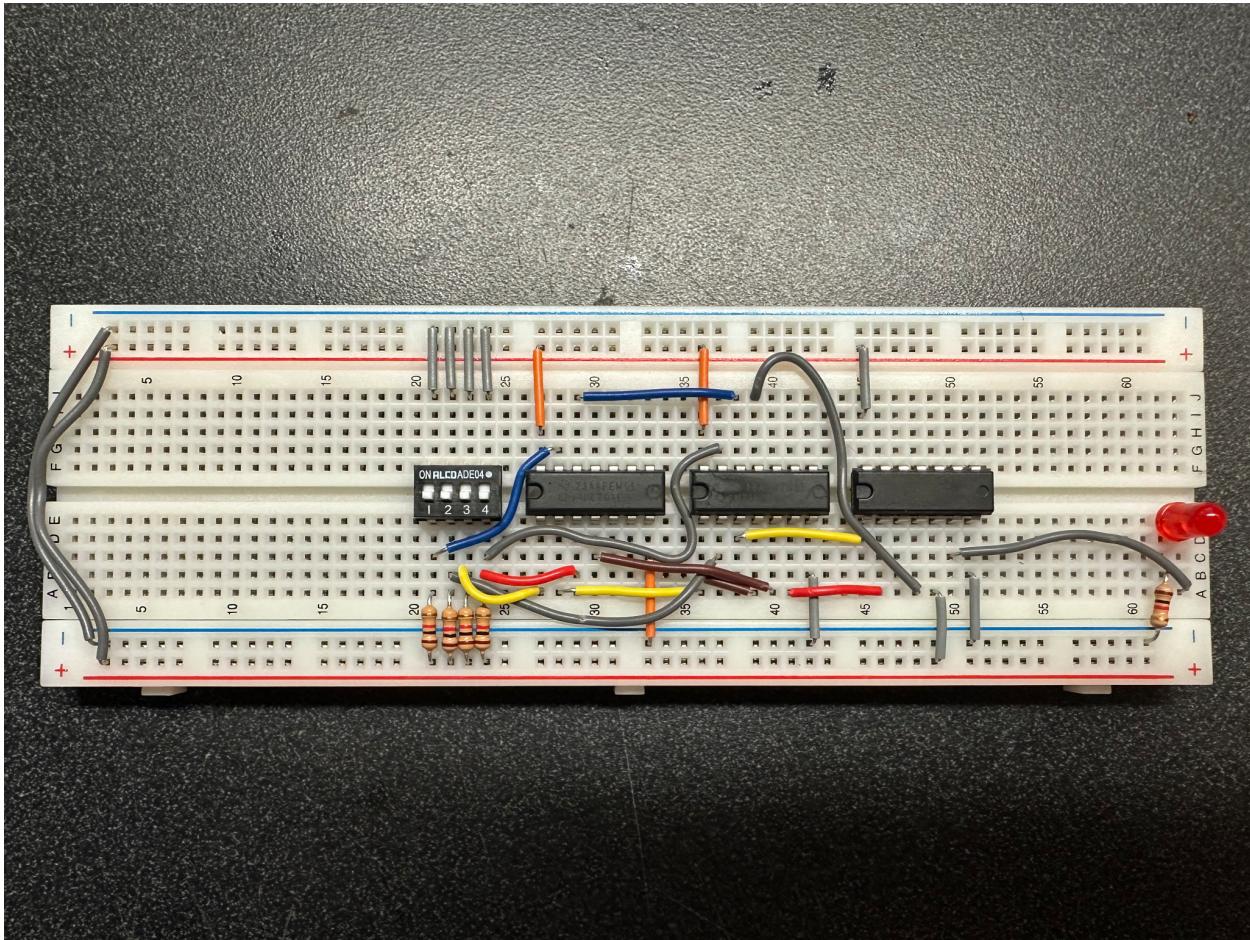


$$\bar{X} \cdot Y + Y \cdot Z + W \cdot \bar{Z}$$

**Figure 1.** A solved Karnaugh map along with its corresponding minimal sum-of-products Boolean expression, derived from the given truth table.

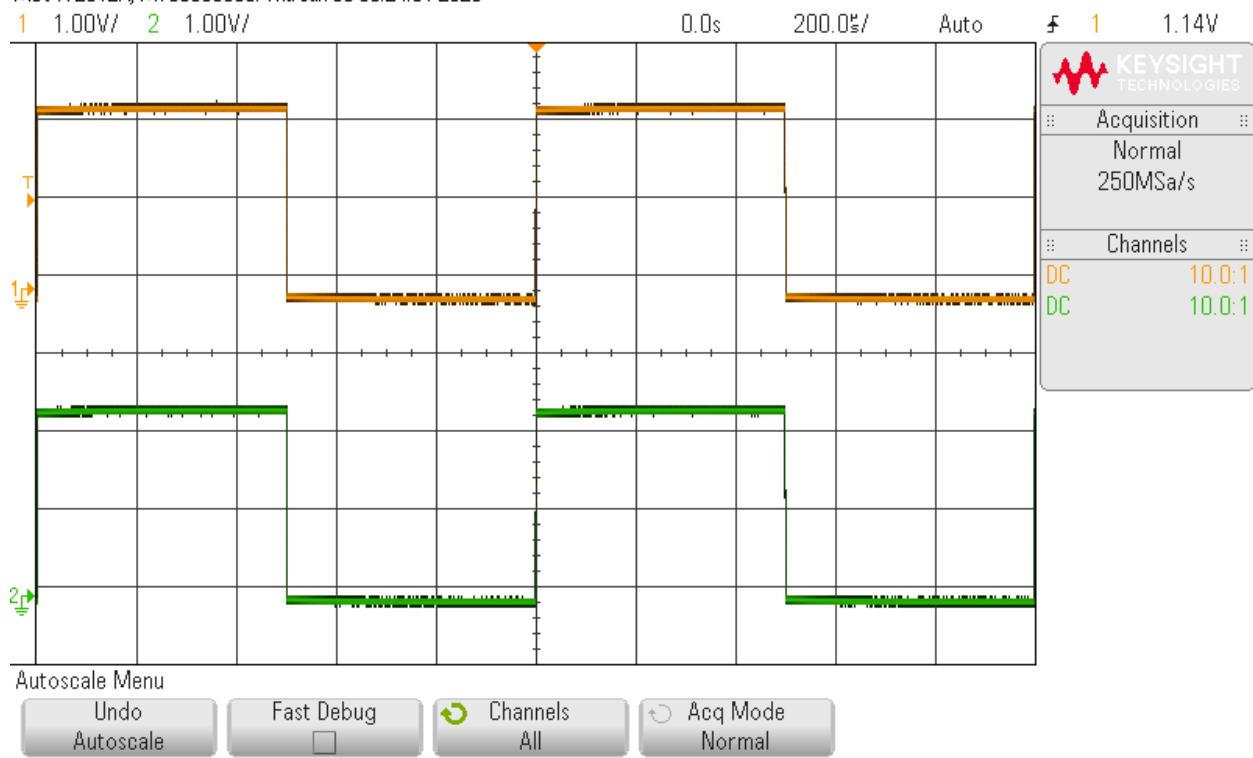


**Figure 2.** The final schematic of the logic circuit, annotated with chip types and pin numbers, serves as a comprehensive wiring diagram for the physical construction of the circuit.



**Figure 3.** Fully assembled and tested logic circuit on a breadboard, demonstrating correct wiring, chip positioning, and systematic debugging approach.

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**Figure 4.** Screenshot of the oscilloscope display showing distinct, clean square waves on both channels.