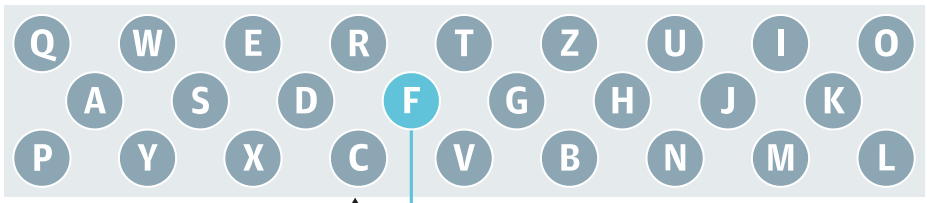
Enigma How the machine worked

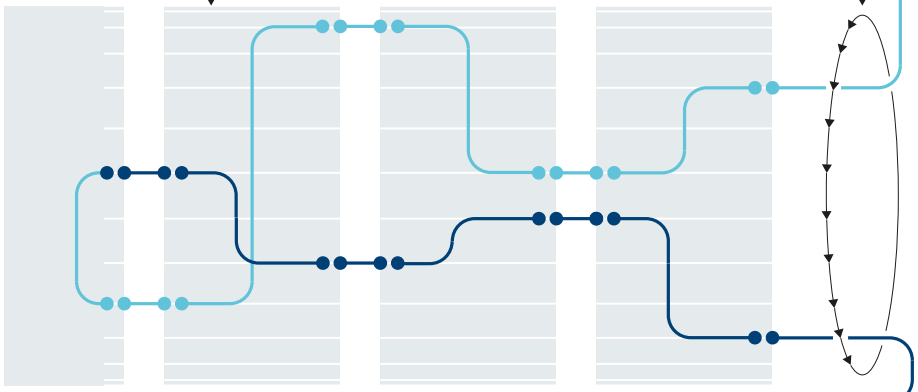


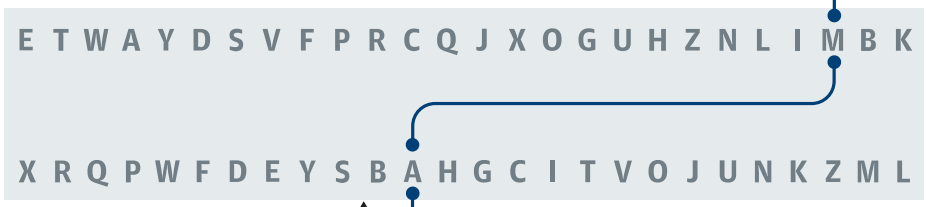
1 | Sender types each letter of the message into a **standard keyboard**

2 | Signal passes through **plugboard** which switches letters around

3 | Three physical **rotors**, internally wired like spaghetti, each change the output letter before a **reflector** sends the signal back through the whole system

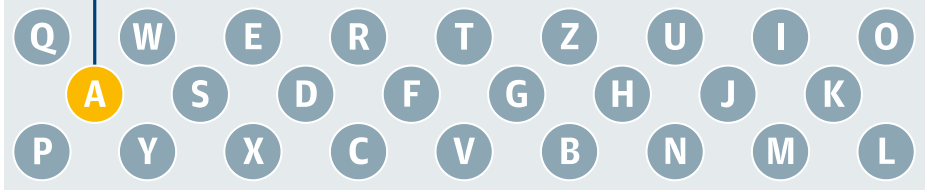
4 | To add to the code's complexity, the first rotor rotates one step **after each key press** (after 26 the second starts to move) so 'FF' might produce 'AQ'





5 | The reflected signal makes a second pass through the **plugboard**

6 | Finally, the signal **lights up a letter** on a light board



7 | Sender copies the lit letters

8 | The receiver writes down

and sends encryption using morse code. The system relies on sender and receiver **setting up** in the same pattern

apparent gibberish but, on keying in 'A', finds a letter F lights up and soon the encrypted message becomes clear

PAUL SCRUTON, GUARDIAN GRAPHIC

SOURCE: SIMON SINGH, LOUISE DADE