

Become a WW2 Codebreaker

The Bletchley Park Codebreakers

Bletchley Park was the top-secret home of the Allied codebreakers in Britain and a birthplace of modern information technology. Bletchley recruited chess champions, crossword experts, intelligence staff and cryptic communication specialists to help crack the Axis Powers intelligence codes and ciphers. The most well known was the German **Enigma machine**.



Enigma Machine

Enigma machines featured a set of circular rotors, as well as a plugboard, which helped create millions of different possible settings for the messages German forces were sending to each other. German Enigma operators were instructed to change their machine's settings every 24 hours, which meant that staff at Bletchley Park had to work around the clock, often by hand, to try to break that day's Enigma messages.

DID YOU KNOW?

The Government Code and Cypher School (GC & CS) and Station X, a secret radio interception station, were also at Bletchley Park. The information gained by workers at Bletchley Park was very important for the Allied War effort.

DID YOU KNOW?

In 1939, in Warsaw, the Polish military showed French and British intelligence agents their cryptanalysis of the Enigma. They promised each delegation a Polish-built Enigma.

The Bombe Machine

It became clear that more formally trained mathematicians were needed to help break the Enigma code. Among Bletchley's most notable early codebreakers were mathematicians Alan Turing and Gordon Welchman as well as chess champions Hugh Alexander and Stuart Milner-Barry.

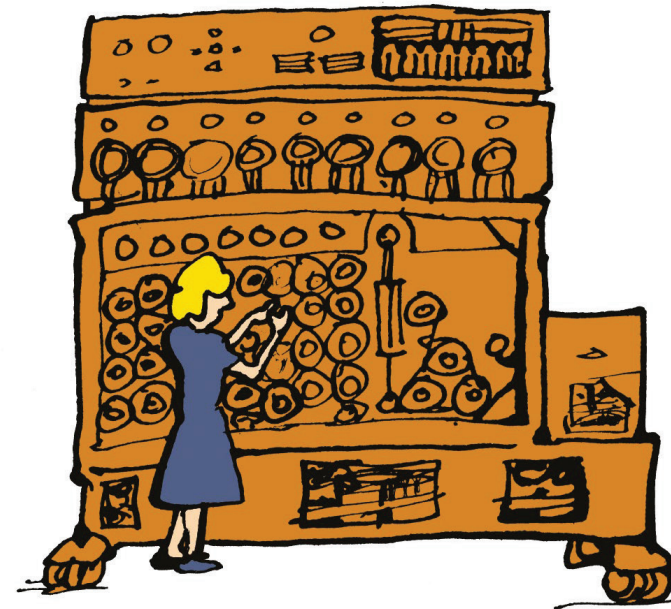
Alan Turing believed that only a machine could beat a machine, so he designed the **Bombe Machine** to help them finally crack the Enigma code.

The electronic Bombe machines featured multiple drums which replicated the Enigma machine circular rotors, allowing for potential setting combinations to be quickly checked. Turing's invention meant that Bletchley Park codebreakers were able to decode quickly and pass on intelligence – often with enough time for it to be acted upon. Bombe machines were so successful that the Germans remained unaware the information sent on their "unbreakable" Enigma machines had actually been cracked by the Allies.

A large amount of women also worked at Bletchley Park recruited from the organisations such as the WRNS (Women's Royal Naval Service), the ATS (Auxiliary Territorial Service) and the WAAF (Women's Auxiliary Air Force). By 1945, 75 per cent of the staff of Bletchley Park were women. Most were involved in administrative work; however some were codebreakers such as Jean Valentine (born 1924, Scotland) who was an operator of the Bombe machine. Her role was to test different combinations to break the Enigma codes.

DID YOU KNOW?

Historians believe that the work of Alan Turing and his fellow codebreakers helped to shorten the duration of WW2 by two years.



Front face of the Bombe Machine at Bletchley Park

A •-
 B -•••
 C -•-•
 D -••
 E •
 F ••-•
 G -•-•
 H ••••
 I ••
 J •-•-•
 K -•-
 L ••-•
 M -•-
 N -•
 O -•-•
 P ••-•
 Q -•-•-
 R ••-•
 S •••
 T -
 U ••-
 V •••-
 W ••-•
 X -••-•
 Y -•-•-
 Z -•-••

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Activity

Can you crack the code?

Write the deciphered letters above the code as you work through the message.

•-• • •-•• •-•• / -•• -•- -• • / ••-• -•- •-• /
 -•• • -•-• •• •-•• •••• • •-• •• -• -•• / - •••• •• ••• /
 -• • ••• ••• •- -•• • / -•-• -•- ••- / •••• •- •••- • /
 -• •- -•• • / •- / -•• -•- -•- -•• / ••• - •- •-• -

Think about . . .

How long did it take you to crack the code?

What steps did you take to try and crack it?

What difficulties did you face when attempting to complete the code? A Bletchley Park employee may have had to overcome the same ones.

Did you have to decode each letter or could you guess some based on letters you had already found?

What would you do differently next time to crack the code faster? The codebreakers at Bletchley Park had to work out their codes very quickly.

