

Several excerpts from documents declassified
the 17th Jan. 2012 - NARA E 013526.

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Preparation of OLYMPUS and MARS Keys
To Crypto-Aids Division, From C/SEC, Date APR-8-1953

In the preparation and printing of cage diagrams for the M-209 and AFSAM 36, the following are the controlling modifications. (By definition, "effective positions" are the six non-zero positions corresponding to the six rotors effective for each cage; "individual kick" is the total number of lugs in one effective position; "total kick" is the total number of bars containing lugs in a combination of effective positions corresponding to a specified set of active pins on the six rotors; and an "overlapped" bar is one having its lugs in effective positions.)

a. M-209

- (1) Each bar must have at least one lug in an effective position; each column must have an individual kick; each total kick from 1 to 27 inclusive must be possible from at least one, but never more than five, of the 64 possible combinations of effective positions.
- (2) The largest individual kick may not exceed 14; at least two of the individual kicks must be odd.
- (3) At least two of the bars must be overlapped; however, not more than four bars may have overlap between the same pair of effective positions. One, but never more than one, individual kick may have all its component bars overlapped; however, such a case must be indicated with "x" and the precautionary note "check this rotor individually".

To: Crypto-Aids Division From: Crypto-Engineering Division
Date: 5 May 53

It is requested that NSA-421 be furnished 10,000 IBM Pin Settings at the rate of 3,500 per month, effective 1 June 1953. This request represents approximately a three months supply. Planning Group has indicated that the M-209 will be replaced within this period of time.

M209 Pin and Lug Settings

Crypto-Aids Division Crypto-Engineering Div. 15 Sept 1953

1. It is requested NSA-421 be furnished 15,000 each M209 pin settings and 15,000 each M209 lug settings in accordance with samples inclusions 1 and 2 respectively.

2. Because the present usage rate is approximately 3,200 pin and lug settings each reporting period, (4 weeks) it is requested that deliveries of 3,200 each be available to NSA-421 each period starting 10 October 1953.

K. KUHN
Chief, Crypto-Engineering
Division