

an sequential... distributor into the...  
~~... part of the...~~

The stepping of the 5 rotors of the machine is irregular except that the center (#3) rotor steps each time. (Rotors #2 and #4 step in reverse).

When banded contacts 7 and 26 in the set end plate are energized, the #1 rotor steps. If the "break" contact in the #4 rotor is closed at the same time, the #1 rotor steps, the #4 rotor also steps. If the "MAKE" contact in the #1 rotor is also closed at the same time, the #2 rotor steps. And if the "break" contact in the #2 rotor is closed at the same time, then the #5 rotor also steps. The contacts are operated by the key on the rotor, the same as in the ECSP stepping key.

Cryptographically, the center #3 rotor is constantly stepping. Rotors #1 & #4 step approximately 3 words out of 4 (on the average) and #4 rotor steps behind one step for every revolution of #1 rotor. Rotor #2 and #5 step approximately every 35 letters (on the average) but #5 rotor steps behind one step for every revolution of #2 rotor. The average cycle length is  $4 \times 26^4 = 609,300$  (approx) but there is no exact computable cycle length. At 60 words per minute, CSP 330s will run about 20 hours before the cycle repeats.

6. Key Lock and Indicator System: When language transmission is necessary, indicators: The rotors are set by hand to the message indicator. Contact is set to the "setup" position and the start switch is thrown to the "ON" position. The machine steps a varying number of steps from 1 to 75 (or more) but averaging 15 steps and automatically stops due to the "exhaustion" of the settings of the 5 polarity reversal relays plus the additional "set-up" relay. (If desired, instructions can require the machine be stepped to a minimum of 5 or 10 steps, by counter, before starting. This is considered

unnecessary & is not contemplated at this time

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The operate switch is thrown to OFF position - control switch is set to operate position. The message tape is inserted in the sensing head. When the operate switch is thrown to ON position and the encipherment or decipherment proceeds from this point, electrical interlocks prevent tampering on the part of the operator. An interlock guarantees stepping of gear rotors and prevents modification of the exact delay of the machine.

7. Associated Documents:

None Available

8. Compromise:

From mission of 2 or more messages with the same indicator & that each is necessary in one of the two messages. The result is that both messages can be read out if depends entirely on the ability to extend the crit.