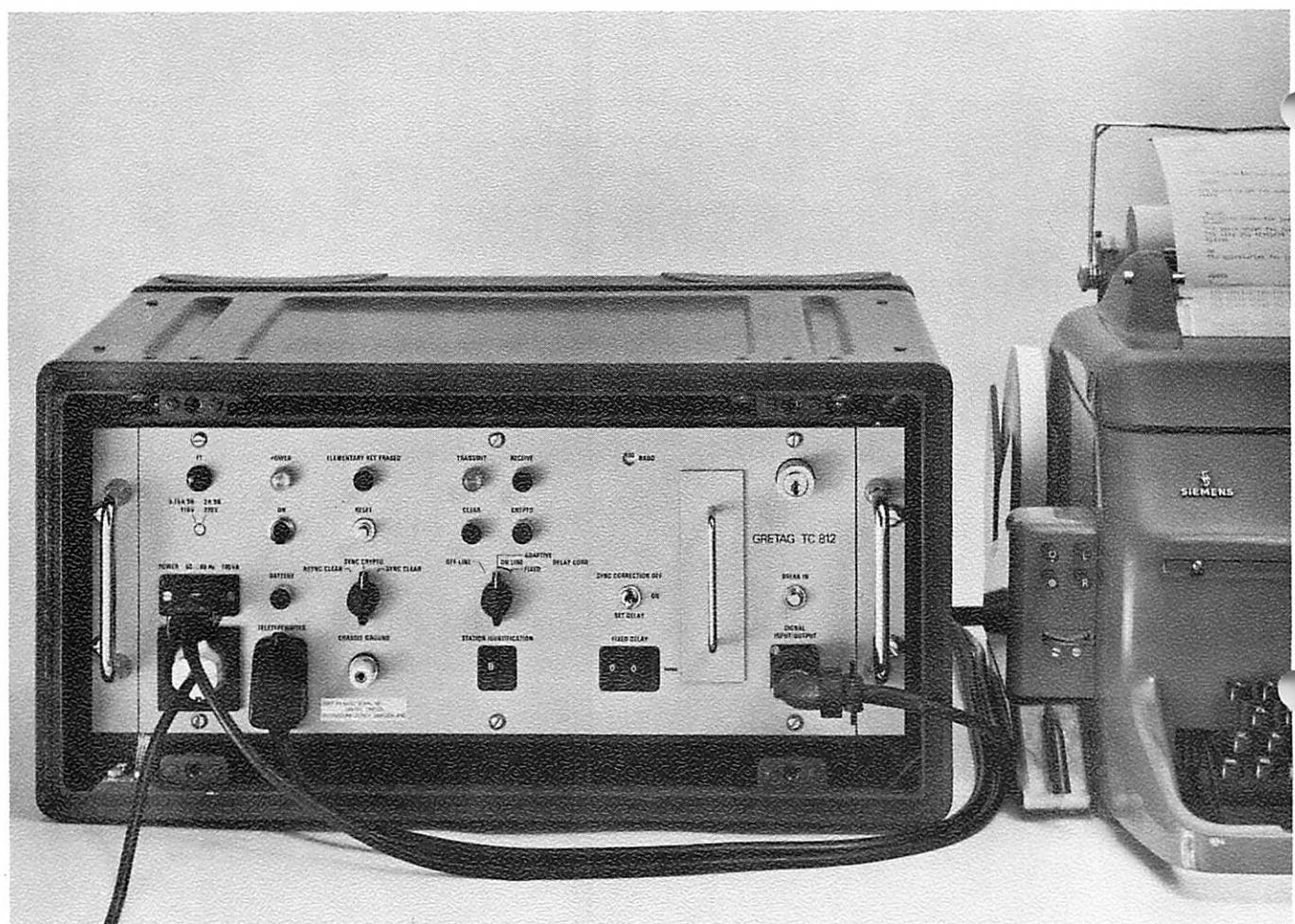


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TC 812



GRETAG

AUTOMATIC ON-LINE/OFF-LINE CIPHER SYSTEM TC-812

The TC-812 is a compact solid state cipher system, intended for tactical teletypewriter communication over short wave radio links and wire circuits.

The TC-812 is primarily an on-line system, but off-line operation is also possible. In the on-line mode a message typed in is enciphered, transmitted, deciphered and printed out at the receiving station in a single operation, without any noticeable delay. Special synchronization circuits keep the transmitting and receiving cipher system synchronized at all times.

The TC-812 is a self-contained computer based system offering excellent reliability and the highest possible security under all operating conditions. An extremely large number of internally generated cipher programs is available for automatic enciphering and deciphering of messages. A particular program is selected by the combination of a secret wiring patch board, a secret elementary key and a non-secret auxiliary key. The secret wiring patch board is removable from the machine and the wiring configuration is easily modified by the user. The secret elementary key consists of ten letters to be typed in on the teletypewriter keyboard prior to operation. This key is stored in an electronic memory. The auxiliary key is a random key inserted automatically with every clear/cipher transition. This feature allows multiple use of a single elementary key without impairing the system's security.

Cryptologically speaking the machine is of no value to an enemy without the secret wiring patch board. If a secret wiring patch board should fall into enemy hands, knowledge of the secret elementary key is still necessary to decipher the message. In practice, the TC-812 cipher is unbreakable, provided that the necessary precautions are taken in handling and selecting the secret elements.

The system is easy to use as most operations are controlled by simple instructions typed in on the teletypewriter keyboard.