

SECRETCONFIDENTIALRESTRICTEDTODATE3 Jan 45FROM

WPC Commanding Officer ✓
 Assistant Commandant
 Dir of Comm Research WPC
 Control O
 Administrative O
 Adjutant
 Intelligence O
 Provost Marshal
 2nd Sig Serv Bn

Chief, Pers & Trng Div
 Chief, Pers Br
 Chief, Trng Br

Chief, Oper Serv Div
 Chief, Communications Br
 Chief, Laboratory Br
 Chief, Machine Br
 Property & Supply O
 Purchasing & Contracting O
 Fiscal & Certifying O
 OIC, Mail Section

Chief, Security Div
 Chief, Protective Sec Br
 Chief, Cryptographic Br
 Chief, Development Br

Chief, Intelligence Div
 Chief, Language Br
 Chief, Mil Cryptanalytic Br
 Chief, Gen Cryptanalytic Br
 Chief, T/A and Control Br
 Chief, I & L Br

*This man must be an ex-Navy
 officer or L.M. WPC*

As discussed
 As requested
 Comments and return
 Information and file
 Information and forwarding
 Information and return
 Recommendation
 See note on reverse
 Signature if approved
 Your action

Here REF ID: A69958. I told
you about, from State Dept
representative in Madras.

I talked with Moak +
Salmon, who were at first
inclined not to answer it
but I suggested that
that man was sincere,
he spent a long time in
composing his letter, and
that ignoring him would
make him still madder.
By pointing out the reasons
for such a device, hoping
he'd have a better
opinion of it after he
got more accustomed to
its use, etc., they might
make a convert of a
potential enemy.

J.

COPY:CY:NEM
11/29/44

In reply refer to
File No. 110.2-RB/rb

AMERICAN CONSULAR SERVICE

Madras, India, November 17, 1944

~~CONFIDENTIAL~~

Special Consultant to the
Assistant Secretary, Mr. Shaw,
Room 551, Department of State,
Washington, D. C. 25.

Sir:

The preface to "Keying Instructions for Converter M-325" invites comments, to be addressed as above.

I received the contraptions on November 12, 1944, and spent the Sunday and every evening since in learning how to use them. One set may or may not be defective; when there is time I will test it again. The other appears to work in the way intended, perhaps simply because I made no mistakes in setting it up. I have now become so adept that I can set it up in an hour.

The device may be a cryptographic marvel, and as such its adoption, especially in war time, is a necessary evil. It is fantastically inefficient as a machine and I trust that it will only be used when ultra-secret messages must be sent. Except because driven to it for want of a better device, no man could have wanted it if he were the man who was to work it. I am impelled to write you because you may not generally receive the comments of code clerks and junior vice consuls who actually will use the horror. Being the only American at this post, I am the one to do so.

An office which sends or receives enough messages to employ a code clerk might find the machine efficient, on the theory that when it is once set up for the day the time thus taken is saved by the ease and rapidity of coding and decoding the rest of the day. It is very doubtful whether even this is the case, and for an office without a code clerk, the amount of time taken to set up and to codify is disproportionate, and moreover cannot be spared during office hours as a rule.

The smallness of the machine chiefly accounts for its inefficiency as an office device. Apart from the machine's liability to break-down and the coincident difficulty of repair, the following faults are to be found with it when in good working order:

1. Even

1. Even with the most careful handling and delicate lubricating, grease from the rotors gets on the fingers and thence on other parts of the apparatus, the paper, pencil, etc.
2. Far from rotating easily by hand, the rotors are most awkward to move except with the stepping button, which itself is none too easy.
3. The 26-letter check appears by experiment to be quite essential, but involves a further handling of the greasy rotors.
4. The jack board wiring is so tiny as to require great care under a good light, and errors are practically impossible to trace without removing all jacks and beginning again. The need to use tweezers to remove jacks is unfortunate, as the tweezers hurt the fingers, they slip and damage the wiring, and the process takes time.
5. The wiring of the reversing rotor is a most painful business. The sharp, stiff and tiny clips need the horny fingers of a stevedore and delicate touch of a violinist.
6. The mental and physical irritation and fatigue caused by the above add their small quota to the day's strain, not to mention increasing the chance of errors when coding or decoding is begun after getting the agony over.
7. The physical process of coding and decoding could hardly be more awkward. A code clerk in constant practice might acquire the necessary habits, but even he could not avoid the slow push-button, letter-by-letter requirement, often with the hand covering one of the two lighted letters until moved awkwardly.

Comparatively, the alphabet strip systems, particularly the Navy's (which are superior to those of the State-Army Signal Corps), are simple to operate. If the justification of the M-325 is greater security, we may have to put up with it. If, however, there is some thought that M-325 is a convenience, let that idea be discarded at once. Nor is anyone who praises the machine to be believed unless he certifies that he himself has used it and is under no compulsion to be less than candid.

The consulate at Madras receives and sends very few messages requiring security beyond the slightly confidential nature of the Brown code. There must be many offices in a similar position. It is hoped that the use of M-325 will not become routine merely because all offices possess it and those with code clerks would prefer to use but one system. It would be considerate of the Department

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and of offices with code clerks to use the Brown or the alphabet strip codes whenever possible in communicating with any small office where the already very busy consular officers can ill spare time to struggle with M-325.

Very truly yours,

/s/ Roy E. B. Bower
American Consul

Copy to American Consulate General, Calcutta.