**G.R. No. 36 / GEN / 227**

- **Date of Registration**: 1812
- **Siemens “Hell-Schreiber” direct writing Telegraph Machine**

The Registry should be notified if this file is passed direct to another branch or if any file is attached to it or detached from it.

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For Authority to P.A.

- **KB**
  - 191
A.C.D.

I attended a demonstration of the apparatus reported on by the Engineer herein, and I must say that there appear to be decided possibilities for police work in apparatus of this nature. The specimen tapes at 1A may be remarked on as follows:-

Samples A and B show the effect to be expected when synchronisation is not exact, and it will be seen that however bad synchronisation is, at least one complete record must be obtained.

Examples C and D may be taken as representing almost perfect reproduction.

Tapes E, F and G show the effect of interference as do tape A and the first half of tape B, and in some cases it will be seen that this is sufficient to render the record partially unintelligible. From personal observation however, I can say that this interference was extremely severe and certainly that to be expected normally. The main drawback of the apparatus is that its speed is limited to approximately 50 words a minute. The ordinary high speed Morse transmission now under consideration and shortly to be put under test would compete with quite twice the speed in actual transmission, though it is admitted that the received record in the case of this latter apparatus requires transcription before it is intelligible to persons without a knowledge of the Morse alphabet.

It is considered that the Commissioner might perhaps be interested in these results.

Chief Inspector,
Communications, D.1.

15-2-35
Chief Inspector Best

This is most interesting. I conclude that you only propose to watch it, and that you do not want us to take any further steps at present as long as we keep in touch with [matter?]

Commissioner
16.2.35.

4A - Copy of minutes in Record File 38372/1

16-2-35.

K. Best
Cd. Comm. Dr.
Copy of minutes in Receiver's File 38372/1.

1.

Responde to Commissioner for any observations.

(Rev) Receiver
Private Sec.
9/2.

2.

A.C.D.

Forwarded for your information please.

(Sgd) E. D. Aran (10/12)

3.

Receiver.

Seen thank you. The Commissioner considers that this apparatus is of considerable interest and that we should keep in touch with its development. One copy of the report has been retained.

A.G.D.

16-2-35.
MEMORANDUM

A demonstration was witnessed at 30 New Bridge Street in offices of Messrs Siemens-Schuckert. The instrument is a direct writing telegraph machine. News messages were being received on the instrument which was attached to a wireless receiver. A reel of carbon strip and a reel of paper tape were fed together under the printing portion. The received signal caused a tuned reed magnet to vibrate and hold the paper tape against a revolving spindle which had a spiral projection. This spiral projection drew lines in the slip whilst in contact, thus forming the letter.

A second spiral on the same spindle commencing 180° from the first one formed a second copy of the letter. By this means synchronising has been dispensed with. The effect of being out of synchronisation is to write the letters diagonally across the slip. The interference experienced was heavy at times and was enough to obliterate the signals entirely but at other times the words were quite legible.

The transmitter attachment which was described but not shown, takes the form of a typewriter keyboard and follows normal telegraphic practice. Handspeed operation is limited to a maximum of 25 words per minute (words of five letters). If higher speeds are required the telegraph keyboard produces perforated tape, on the principle of the usual 5-unit telegraph machines. The speed is then brought up to a maximum of 50 words per minute.

Messrs Siemens have no literature to hand at present but stated that the receiving attachment would cost about £100 and the transmitter attachment £250 to £300 approximately.
these being subject to rate of exchange.

The "Hell-Schreiber" attachment can be added to any continuous wave transmitter capable of automatic transmitting of morse at high speed.

When literature is available it will be forwarded to this office.

Chief Inspector Beat is interested and would like to see this report.