An electric ‘telegraph’ clock

An electric clock with provision for external synchronisation, dating from around the first quarter of the 20th century. The clock bears no signature or other identifying marks, but features such as the case, dial, hands, and wiring suggest a French origin.

The movement is of an experimental or prototype design. Every component part is stamped with a number ‘3’, suggesting a small batch run. Some features, for example the switches operated by clutch plates, appear to have been added as part of a development process. The design of the movement is typical of a precision engineering workshop rather than that of a clockmaker.

The case of solid walnut, with utilitarian finish, with rear access door to the movement and local battery.

Unusual electrically driven Hipp Toggle movement, with inputs and output associated with synchronisation from an external source, suggesting its use in part of a larger system such as railway, telegraph, post office or large business.

The going train consists of a balance wheel escapement driven by a Hipp Toggle switch. An adjustable steel armature on the balance staff is attracted by a pair of electro-magnet solenoids. The motion work and other functions are driven from the balance staff by means of a verge and crown wheel.

Synchronisation of the minute and seconds hands at 12 o’clock is achieved by a complicated arrangement of 3 solenoid pairs, 2 clutches and 3 switches.

The only output from the clock is a switch contact that closes for approximately 15 minutes every 24 hours. This was probably intended as a signal to the external system that the clock is ready for synchronisation.

The main question over the functionality of the clock has to be why is it so complicated? An external sync. signal could be applied without the clutch mechanisms inherent in this design, which leads one to suspect that the original design intent involved more than a straightforward daily synchronisation.

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