

First ever quartz watch with internal IC thermo-compensation

Registration No.	Number 000306		
Registration Date	September 14, 2021	Registration Category	Category 1

Name (Model, etc.)	CITIZEN EXCEED Cal. 1930
Location	Nishitokyo-shi, Tokyo
	CITIZEN WATCH Co., LTD.
Owner (Custodian)	CITIZEN WATCH Co., LTD.
Manufacturer (Company)	CITIZEN WATCH Co., LTD.
Year Manufactured	1981
Year first appeared	1981
Reason For Selection	Mass production of quartz watches was initially hampered by the frequency-temperature characteristics of the quartz oscillator and the need for a fully adjusted condenser. The solution was a compact and thin CMOS-IC featuring a built-in temperature sensor that directly monitored the ambient temperature of the oscillator to provide data for frequency correction. 1981 saw the release of the first quartz watch with internal IC thermo-compensation, featuring a tuning fork oscillator that corrected for frequency-temperature characteristics. This watch represents an important milestone in the development of watch technology.
Registration Standard	1-A (Show an important aspect or stage of the development of science and technology.)

Open/Closed to Public	Closed to Public
Photo	
Other useful information	