



ラジオ計測技術
技術部

Active Hydrogen Maser Frequency and Time Standard

CH1-75



COMPOSITION AND PRINCIPLE OF OPERATION

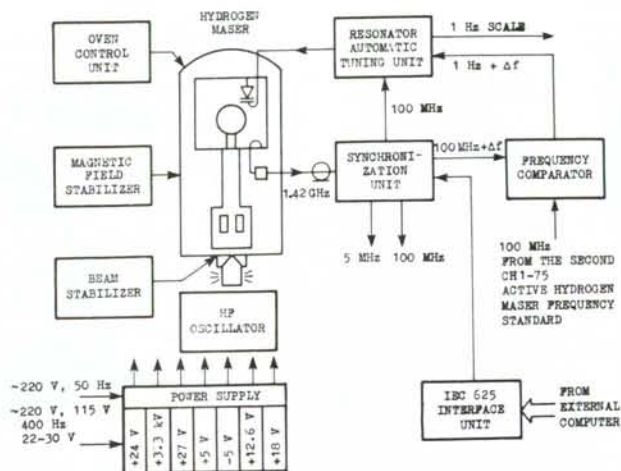


Fig.1. CH1-75 Simplified Block-diagram.

The CH1-75 principle of operation (Fig.1) is based on 5 MHz crystal oscillator frequency phase locking to the hydrogen maser signal.

APPLICATION

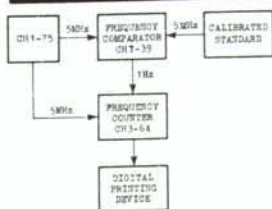


Fig.5. Frequency standard calibration block-diagram using external frequency comparator

Active maser frequency standards provide metrological verification of quantum frequency standards of different types (rubidium, cesium, hydrogen and others) during their development, production and service. (Fig.5,6).

On the base of time and frequency hydrogen standards small-size time and frequency systems are developed.



Fig.6. Frequency standard calibration block-diagram using a built-in comparator and a frequency counter

High resolution satellite NAV systems can be built on hydrogen frequency standards base.

Radiointerferometer with superlong base, using hydrogen frequency standards, provides angular resolution = 10^{-2} seconds of arc, that for example allows to determine the continent shift with centimetric error.



詳しい資料のご請求は営業本部まで

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