

Thesis Title	X-ray Timer Meter
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ABSTRACT

X-ray is very useful in medical diagnosis but it is hazardous. Radiological technician must operate the generator carefully and the generator must work accurately and precisely. The X-ray timer meter can be used in quality assurance program and maintenance for testing of exposure time of x-ray generator.

The X-ray timer meter is the instrument for measuring the exposure time of a diagnostic x-ray generator. It can measure the x-ray pulse of single phase x-ray generator and measure exposure time of three phase and constant potential x-ray generators. A semiconductor detector is used to detect the radiation waveform caused by x-ray. After the radiation waveform is detected, it is amplified to gain the signal to noise ratio. The waveform is passed to the counter and display to show pulse and time.

The X-ray timer meter has accuracy in pulse mode ± 1 pulse and in time mode within 0.003 second compared with x-ray test device (Victoreen4000M+).