

# ABSTRACT

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Speaking clock is a clock that can announce the time. The main purpose to design this project is to provide an easy way for blind people, to know the time by whistling. It is designed to activate in a single room.

The speaking clock circuit consists of six independent circuits which are power supply, whistle switch, microcontroller (PIC16F84A), voice record and playback chip (ISD2560), audio amplifier and speaker. The whistle switch is a sound activated switch. Once the whistle switch is activated by whistling, it will send a trigger pulse to the microcontroller. The microcontroller is functioning as a clock, which will call the ISD2560 to playback the speech which recorded inside the chip, when it receives trigger pulse from whistle switch. The voice record and playback chip can record and playback independent audio signals for 60 seconds. Before applying to the speaking clock circuit, the ISD2560 need to record the audio signal for time. The output from the ISD2560 is not loud enough to be heard in a single room. Therefore, before connect to the speaker, an audio amplifier LM386 is used to amplify the sound to get the require output.