

Wakey wakey: A history of alarm clocks and the mechanics of time

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Credit: AI-generated image ([disclaimer](#))

It's the time of year when we Australians start returning to our normal rhythms. The first beats of the day are often the dreaded beeps of the alarm clock or a digital symphony from a bedside phone.

These modern electronic alarms are just the latest in a long sequence of

methods used to wake us from sleep: from [the watchmen on ancient city walls waiting for the dawn](#) to more recent [clocks on wheels that have to be chased](#) to stop ringing.

The job of waking us up when our [body clocks](#) are telling us to sleep is a big ask. When did we first start using alarms, and what did they sound like? What's changed about the sounds of time, and what hasn't?

Birdsong

Some of the earliest words we have for time measurement show people's particular interest in dividing up the different parts of the night.

In the pre-[modern world](#), without electric lights and electric alarms, people paid more attention to the quality of light and the sounds around them. A rich vocabulary emerged in ancient languages for the different parts of the night. One [early Latin word](#) for the time before dawn was *gallicinium*, the time of the cock's crow. Scientists have [since discovered](#) roosters really do know what time that is.

Birdsong remains an important way of experiencing waking up. In Australia, we often evoke birdsong when we think about sleep and waking—from [morning caroling magpies](#), to [the versatile currawong](#) or the midnight call of [willie wagtails](#). Less melodic, though equally striking, is another possible bird noise associated with early rising—"sparrow's fart"—[first attested to](#) in the 19th century.

Human wake-up calls

The human body has developed its own repertoire of alarms.

The Islamic call to prayer, [the adhan, sung by men called muezzin](#), is one

of the most sonically striking examples, with various versions marking out differences between traditions and regions. The [melismatic chant](#)—where a single syllable is sung over several musical notes—is both a wake up call to prayer ("Prayer is better than sleep") and a prayer in itself.

Some early-morning calls were combined with weather forecasting systems. In the 15th century the [town criers of the port of Sandwich](#) on the south coast of England would call out the wind changes in the night so seafarers would know when favorable (or unfavorable) winds sprang up. Much later, in some parts of the industrial world, [professional knocker-uppers](#) might use a pea shooter or stick to tap on windows to wake you up for your shift.

Having humans wake you up would usually mean someone has to stay up all night. But how would that person know when to cry the alarm? Sundials would obviously be useless. This is one reason technologies developed to count the hours of night—ancient and medieval [water clocks](#) with markings to show how water flow corresponded to time passing, and later (from around the 14th century) [sand glasses](#) in the familiar hourglass shape.

Mechanical clocks

The Middle Ages saw one of our most amazing inventions—mechanical clocks, originally driven by weights. Gravity [pulled suspended weights down](#) to drive the clock mechanism. The weights were periodically wound back up for another cycle.

These clocks began as large objects in churches and town belfries. Some had elaborate automata: the extraordinary 16th-century [Strasbourg clock](#) includes a famous cockerel whose cries echo through the cathedral. Its automated rooster is from an earlier clock made in the 14th century.

Some large clocks played music on bells before striking the hours. This year is the 700th anniversary of what may be the first such musical clock, installed in a [monastery near Rouen in 1321](#). It played a hymn, [Conditor alme siderum](#) (Dear Creator of the Stars), for the season of Advent that starts the Christian year.

Such chimes are our first recorded mechanical music, and a precursor to today's musical alarms. The technology was probably developed by tech-geek monks as a way of dealing with waking up to sing their prayers in the night—even better if that wake-up call, like the adhan, was a pious prayer itself.

The modern alarm clock

The earliest versions of the clocks we know today were made for large communities, public spaces or courtly elites.

Gradually though, and certainly by the mid to late 15th century, you could find heavy [iron wall clocks](#) in private houses (made in places still famous for clockmaking, such as Switzerland). These often had pins that you could place around the clock face to set the bell ringing at a particular time. These house alarm clocks could wake the owner to work and pray.

It was during this period, too, that compact spring mechanisms made smaller and [smaller personal watches](#) possible, carried or worn on the body from the 16th century.

The personalisation of [time](#) accelerated in the [19th century](#) and gave rise to some wild modern alarm clocks. Among the more striking inventions of the French magician Jean-Eugène Robert-Houdin was [a clock that lit a candle after the alarm sounded](#).

Though nothing has reached the sophistication of the breakfast-making Rube-Goldberg-style [alarm](#) clocks seen on [The Goodies](#), automaton clock alarms have promised [freshly made coffee and toast](#) or even just their [aroma](#). Here the familiar sounds of the kitchen, with their enticing morning smells, soften the rude awakening from sleep.

Today's alarms, with all their invention, come as a gift (or depending on how much you enjoy waking up, a curse) from the Middle Ages to us today.

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