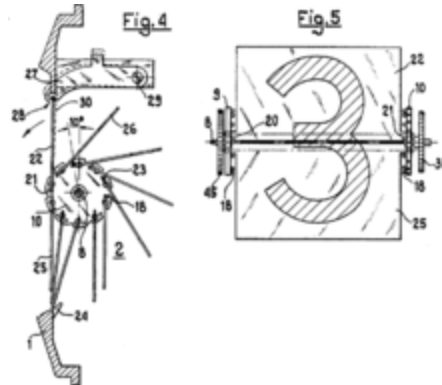


Split-flap display

A **split-flap display**, or sometimes simply a **flap display**, is a digital [electromechanical display device](#) that presents changeable [alphanumeric text](#), and occasionally fixed [graphics](#).



Video of the main departure board
[Praha-Smíchov](#) station, Czech
Republic (2012). This Signaltron was
manufactured by Pragotron



Schematic of a split-flap display in a
digital clock display



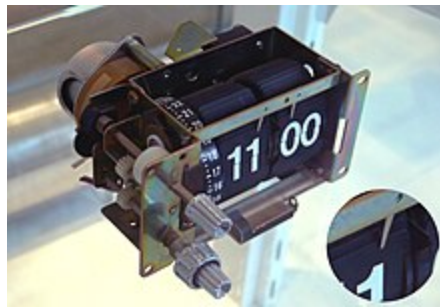
An animation of how a split-flap
display works



Flap departure board at [Gare du Nord](#), Paris (2007)



Section of a split-flap display board at [Frankfurt \(Main\) Hauptbahnhof](#) (2005)



Enlarged inner workings of a [split-flap clock](#)

Often used as a [public transport timetable](#) in [airports](#) or [railway stations](#), as such they are often called **Solari boards** after Italian display manufacturer [Solari di Udine](#), or in Central European countries they are called **Pragotron** after the Czech manufacturer.

Split-flap displays were once commonly used in consumer digital clocks known as [flip clocks](#).

Description

Each character position or graphic position has a collection of flaps on which the [characters](#) or graphics are [painted](#) or [silkscreened](#). These flaps are precisely rotated to show the desired character or graphic. These displays are often found in [railway stations](#) and [airports](#), where they serve as [flight information display system](#) and typically display departure or arrival information.

Sometimes the flaps are large and display whole words, and in other installations there are several smaller flaps, each displaying a single character.

[Flip-dot displays](#) and [LED display](#) boards may be used instead of split-flap displays in most applications. Their output can be changed by reprogramming instead of replacement of physical parts but they suffer from lower readability. They also can refresh more quickly, as a split-flap display often must cycle through many states.

Advantages to these displays include:

- high [visibility](#) and wide [viewing angle](#) in most [lighting](#) conditions
- little or no [power](#) consumption while the display remains static
- Distinct metallic flapping sound draws attention when the information is updated.

The [Massachusetts Bay Transportation Authority](#) has designed the new LED replacements for its aging Solari boards at [North Station](#) and [South Station](#) to emit an electronically generated flapping noise to cue passengers to train boarding updates.^[1]

Many [game shows](#) of the 1970s used this type of display for the contestant podium scoreboards. Usually, the flip was left-to-right on a vertical axis, although up/down on a horizontal axis was not completely unknown. Early seasons of the [game show *Family Feud*](#) used a split flap display as part of the game board (subsequent seasons used more modern digital displays, and eventually simply used a large digital [flat screen](#) monitor). The game board on the [Nickelodeon](#) game show [Make the Grade](#) was a 7x7 split-flap display, used to display subjects and wild cards, as well as tracking contestants' progress. The television game show [Chain Reaction](#) on [Game Show Network](#) features computer-simulated split-flap displays to display the various words in a chain.

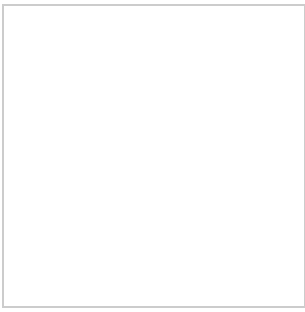
In Italy, split-flap displays have also been occasionally used as [destination signs](#) for transit vehicles; there was also a brief vogue for them in the United Kingdom in the mid 1980s.^[2]

Non-informational uses

The aesthetic appeal of the displays is such that they have also seen use in purely artistic forms, such as in [Pedestrian Drama](#), contemporary artwork using this display technology, and art by [Juan Fontanive](#), who has used the mechanism extensively since 2005.

The album cover for [The Enemy](#)'s album [We'll Live and Die in These Towns](#) is based on the Solari design seen at British railway stations.

Gallery



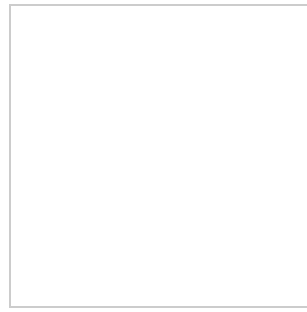
Flap display at [Breukelen railway station](#), Holland



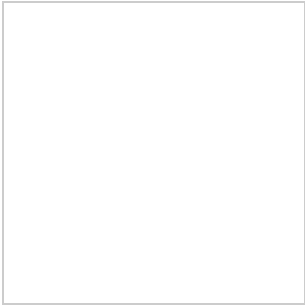
Flap display as departure board at [Hanover Hauptbahnhof](#), Germany



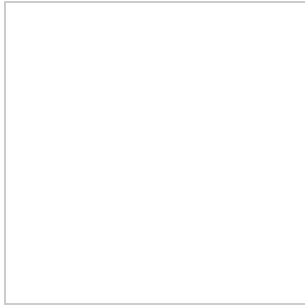
Split-flap display with the name of the end station on the tram [Tatra KT8D5](#) in [Prague](#), [Czech Republic](#)



Cifra 5 clock (1954)



Cifra 5 internal mechanism



Cifra 23 clock

References

1. Mac Daniel (2006-04-06). "Nostalgia for noise at South Station" (http://archive.boston.com/news/local/massachusetts/articles/2006/04/06/nostalgia_for_noise_at_south_station/) . The Boston Globe. Retrieved 2022-05-31.
2. "Eastern National Olympian Coach" (<https://www.flickr.com/photos/adogriff/4477590912/>) . 7 September 1986.

External links

- [SEGD Design Awards: A Sign of Democracy](https://web.archive.org/web/20131219030803/http://www.segd.org/design-awards/index.html) (<https://web.archive.org/web/20131219030803/http://www.segd.org/design-awards/index.html>)