

ABSTRACT

DISPLAY DEVICE FOR A PORTABLE INSTRUMENT SUCH AS A WATCH

The display device (2) is for a portable instrument, such as a watch (1). The device including at least a first transparent or semi-transparent plate (4, 6) arranged
5 on a bottom element (5). Several closed cavities (29) are formed at least in part in the first plate in the field of view of the device to display information through the plate. Each cavity (29) is connected by a respective channel (28, 25) through the bottom
element (5) to a tank (24) of coloured fluid via feed means (23, 27) for filling or
emptying each closed cavity of coloured fluid for the display of information. The feed
10 means include at least one micropump connected by an inlet pipe (26) to the coloured fluid tank, and microvalves (27) connected to the micropump by a common outlet pipe (25). Each cavity (29) is directly connected via its respective channel to a
corresponding microvalve. The micropump and the microvalves are controlled by
electric signals from control means, which can be clocked by a time base in order to
15 control the display of time information on the display device using the coloured fluid.

Figures 2 and 3