



From the Workbench Dials, Subdials and Hands

What's in a face?
Theodore Diehl looks closer

⌚ If the movement of a wristwatch, with its gears, pinions, barrels and springs, can be seen as a living organism with the balance wheel and anchor as its beating heart, then the dial and hands must certainly represent the face of the creature. The most essential function of a wristwatch is to display the time, and so visibility remains a virtue for any watch. However, visibility does not necessarily mean that mere "dial functionality" will fit the bill. In the same way that we consciously or unconsciously judge the faces of friend and foe alike, a successful watch dial will also require a sense of style and will have to possess looks that appeal to our senses, or, even better, that exude sensuality. Attention to a harmonious layout, colour coordination and use of contrasting materials with complementary shapes and sizes adds to the attraction, and, just as with people, every existing form will have its supporters and opponents.



The dials of both the A Lange & Söhne Datograph and the Patek Philippe Ref. 3940 are models of clarity, each achieving this most important of features in its own unique way.

Dial aesthetics

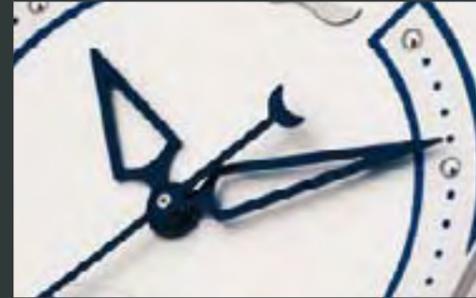
Although there is no one delineating absolute in dial design, there is a certain consensus concerning some of the abstract notions of what a superior dial design should intrinsically possess. As mentioned above, legibility takes precedence. (Fashion watches are an altogether separate issue – no holds barred there!) This legibility problem becomes even more exacting when more information is being shown via subdials in chronographs, perpetual calendars and the like. Layout and visual balance, as well as total dial size and contrast, are of primary concern in such watches.

In pure horological circles, both the Patek Philippe Ref. 3940 and the A Lange & Söhne Datograph have been declared pure classics. Both supply different solutions to the difficulties of visibility, but the subdial placement of both is harmonious and restful to the eye. The clear markings and divisions, with hands clearly contrasting with the dial yet not clashing, are exemplary. The typography

each uses accentuates these attributes. However, unlike a human face, all these detailed issues in a watch are played out on a field covering only a few square centimetres yet are still recognizable from some distance. Achieving this kind of perfection is no easy feat; even the “Great Houses” only succeed in producing a small number of watches from their entire collection that fulfil all of the criteria to become “classics”. However, when a large number of people are really attracted to a watch, it is a sign that everything about it has been made in the right proportions. Democracy rules in this beauty contest of the watch manufacturers.

It is just chance that the Lange and the Patek shown here both use so-called alpha-style hands. (Until a few years ago the Patek Ref. 3940 was only available with applied indexes and Dauphine hands, popular in the 1950s; the new Roman-numeral version is classical yet fresh and has a higher degree of visibility for ease of reading the calendar’s information.) This Roman-numeral version of the Ref. 3940 is also a perfect example

Examples of classic hands. Clockwise from top-left: baton hands, large skeleton hands, luminous hands, hands with fluorescent micro gas-light tubes, sword hands and dauphine hands.



of the excellent visibility afforded by a high-quality dial with painted markings. Extremely difficult to make, these watches require a special touch of the hand, with the paint being applied in several layers. Only a few people have the talent to hand paint dials at this level. On the other hand, the Datograph has applied indexes at 1, 5, 7, 11 and 12 o'clock, and applied Roman numerals at 10, 2 and 6 o'clock, with painted markings on the rest of the dial. Applied markings can either be glued to the surface or set in the dial and positioned via a drilled hole with a small fastener. Indexes are more or less the standard for sports watches that must be visible in gloomy conditions since the indexes can easily be filled with luminous, light-giving material.

This combination of applied and painted markings is one of the most widely used in dress and sports watches alike, and can be seen in the range of virtually every brand that exists today.

Surface treatment and markings

In addition to the overall dial layout, the surface treatment and/or colour of the dial is of exceptional importance. The dial's surface can be painted, printed, lacquered, enameled, brushed,

decorated with an engraved or cut pattern such as *guilloché*, be completely transparent or partially cut out to allow the movement to be seen. Every conceivable material known to man has been used in dial making, from paper and meteors to platinum and thin air. The art of *guilloché* or engine-turned dials deserves special mention. This is an art form in itself, and truly hand-made *guilloché* dials are scarce indeed. The dial is mounted in a special chuck, and is lightly touched by small cutters of various sizes in coordination with the dial's revolving movement in the holder. Where the engraved lines intersect one another, beautiful patterns emerge. The dearth of highly skilled artisans for this work has led to some companies stamping the *guilloché* patterns on the dial without resorting to true engine turning; a close-up look under the loupe usually reveals the difference. The use of engine-turned dials emerged in the 18th century and reached its zenith in the 19th.

Since the appearance and colouring of the dial are greatly affected by lighting conditions and reflections, all of the finer brands generally coat either one or both sides of the watch glass with an anti-reflective coating, which provides a beautiful visual depth and warmth to any type of dial.

The Breguet Alarm Watch is a fine example of classic Breguet hands and *guilloché* dial patterning.



Generally speaking, the majority of dials fall into four major categories:

- painted dials – that is to say, dials in which the numbers and other markings are painted directly onto the dial's surface (whether on metal or painted metal)
- dials in which parts of the indications are separately manufactured and later mounted, applied or otherwise fastened to the dial
- pressed dials – in which the majority of indications are pressed into a thin dial blank
- dials using a combination of the above-mentioned techniques

Hands

Keeping in line with our facial metaphor, the hands are to a watch what the eyes are to a face. Look at any high-street fashion mag and take a good look at how the eye makeup accentuates the clothes – this is how watch hands influence and finish off the total effect of the dial. Although

many classical hand shapes exist, such as the Dauphine-, alpha-, baton-, spade-, Breguet- (see the above photo) and leaf-shaped varieties, many watch hands have taken on the role of a counterbalancing accent to the dial's form. A hand is only constrained by length, not by width, and many designers have made use of this fact to create wide but partially transparent hands, arrow and arc shapes, lightning bolts, skeletonised forms... In fact, everything you could imagine has been done.

Visibility

Leaving fashion and returning to the basics of visibility, we cannot ignore illumination. Classical dress watches will generally leave you in the lurch here, although in recent years several brands have introduced dress watches with a modicum of light-giving properties for that after-concert peek at the time. More serious night owls will require a sports watch with big clear hands coated with LumiNova pigment, tritium or even set with micro gas-light tubes to help them read the time during their escapades. ◉