

**Press release**

**Patek Philippe Geneva  
October 2014**

**Patek Philippe Grandmaster Chime Ref. 5175  
The sound of history**

**To pay tribute to its 175th anniversary, Patek Philippe created a collection of limited-edition commemorative timepieces, and one of them stands out in particular. It is the so far most complicated wristwatch of the eminent family-owned watchmaking companies and decidedly one of the world's most elaborate wristwatches. This is due not only to the number of complications involved but also to the horological degrees of complexity, two of which have been added to the annals of watchmaking for the first time. Moreover, the Grandmaster Chime is the first double-face wristwatch presented by Patek Philippe that can be worn with either dial facing up: the one that focuses on the time and the sonnerie, the other dedicated to the full instantaneous perpetual calendar. Changing the face is very simple thanks to the ingenious reversing mechanism in the lugs. It is amazingly easy to operate and firmly secures the case in the selected position. Incidentally, the information for which a watch is most frequently consulted – the current time and the date – is displayed on both dials. The ultimate in user-friendliness and safety is assured with intelligent mechanisms that prevent potentially damaging manipulations and thus reliably protect the highly complex movement with its intricate cosmos of tiny parts.**

Patek Philippe's Grandmaster Chime is a wrist-format timekeeping instrument of absolutely unprecedented complexity and ingenuity that establishes new benchmarks in terms of technical and aesthetic elegance. Its double-face case with a diameter of 47 mm, it accommodates four spring barrels and no fewer than 20 complications, including coveted functions such as a Grande and Petite Sonnerie, a minute repeater, an instantaneous perpetual calendar with a four-digit year display, a second time zone, and two patented global debuts in the domain of chiming watches: an acoustic alarm that strikes the alarm time and a date repeater that sounds the date on demand. Four additional patents emphasize the innovative thrust behind this watch.

The Grandmaster Chime is a striking example of the "intelligent watch" as envisioned by Patek Philippe's philosophy. To protect complicated timepieces against damage caused by inadvertent manipulations, the manufacture's engineers devised clever "isolators" that interrupt the flow of power between individual mechanisms or block certain functions while others are active. The engraved inscriptions and symbols on the case and the pushers are further hallmarks of convenience that make the Grandmaster Chime a self-explanatory grand complication watch.



The effort invested by Patek Philippe in this unique anniversary timepiece is remarkable. More than 100,000 hours were logged for development, production, and assembly, of which 60,000 hours for the components of the movement. Each caliber consists of 1,366 parts and each case of 214 separate parts, bringing the total number of components for each Grandmaster Chime to 1,580. Thus, it took 11,060 meticulously hand-finished parts to assemble the seven limited-edition exemplars of Patek Philippe's commemorative Grandmaster Chime masterpiece. Seven watches that are making history reverberate.

### **Grande and Petite Sonnerie**

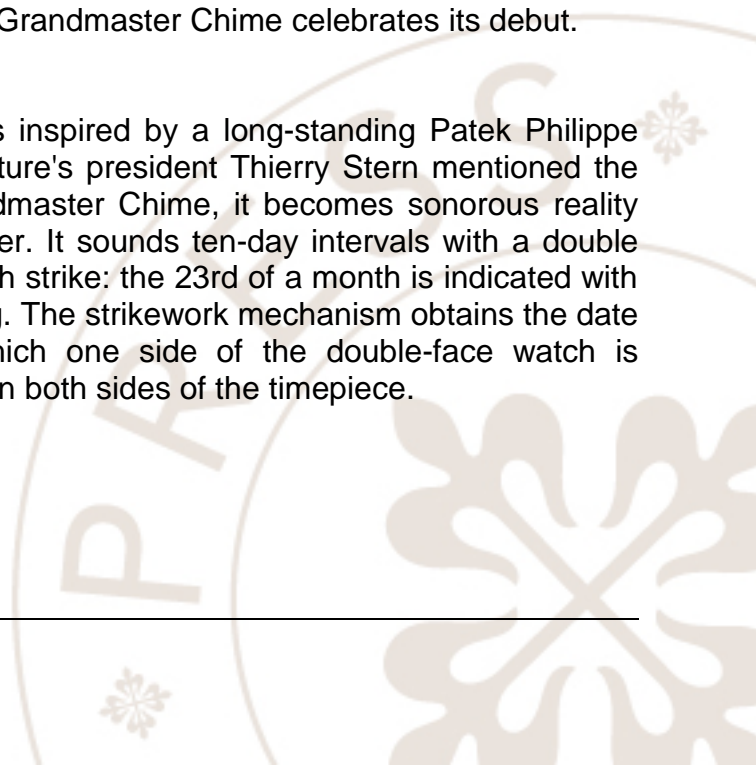
This complication automatically sounds the hours and quarter-hours at each quarter hour (in the Petite Sonnerie mode only the hours at the top of the hour and only the quarters at each quarter hour). It ranks among the functions that aficionados and collectors hoped to see implemented in a Patek Philippe wristwatch. But it was always clear to the manufacture that this would not happen unless a strikework power reserve of at least one entire day could be achieved. The necessary technology was not available until just recently. But now, thanks to the double barrels reserved for the strikework mechanism, the sonneries can be activated during a period of more than 30 hours before they need to be rewound by hand. Remarkably, this was accomplished even though the quarter-hours are sounded not on two but instead on three gongs with different tone sequences. This requires 50 percent more energy for each quarter-hour strike.

### **Minute repeater and alarm**

The strikework double barrels also deliver the energy for the minute repeater, which on demand strikes the hours and quarter-hours as well as the minutes that have elapsed since the last quarter-hour. Connoisseurs automatically associate the clarity and volume of the sounds with Patek Philippe. After all, it was the Genevan manufacture that orchestrated the comeback of this queen of complications 25 years ago. The alarm strikes the alarm time by reproducing the complete tone sequence of the minute repeater, with exactly the same sound quality. This is a function never before integrated in a mechanical wristwatch. And this is not the only "striking" global premiere with which the Grandmaster Chime celebrates its debut.

### **The date repeater**

The idea behind this patented global debut was inspired by a long-standing Patek Philippe customer who in a discussion with the manufacture's president Thierry Stern mentioned the possibility of a date strike. Now, with the Grandmaster Chime, it becomes sonorous reality when the date repeater is triggered with a pusher. It sounds ten-day intervals with a double high-low strike and the remaining days with a high strike: the 23rd of a month is indicated with a ding-dong ding-dong followed by ding-ding-ding. The strikework mechanism obtains the date information from the perpetual calendar to which one side of the double-face watch is dedicated, and which controls the date displays on both sides of the timepiece.





### **Instantaneous perpetual calendar**

The dial of the calendar face is eminently legible. It features four subdials with analog displays grouped around the gold-framed four-digit year display in the middle. The month is indicated at 3 o'clock, the date and leap-year cycle at 6 o'clock and the day of the week at 9 o'clock. The time of day appears at 12 o'clock on the 24-hour and 60-minute subdial. With the exception of the four-digit year, the calendar displays advance instantaneously and at the same time. As regards the date, this is indispensable because the date repeater must obtain precise information, especially during the minutes before and after midnight. The perpetual instantaneous date is also displayed on the other face of the watch where it frames the moon-phase display at 6 o'clock. A patent granted for the four-digit year display acknowledges the elegant mechanical solution which allows the year to be conveniently incremented forward or backward with two pushers.

### **Local time and second time zone**

When the crown of the watch points to the right, the owner sees the dial that apart from local time also indicates the time in a second time zone together with a useful day/night indication. The same dial features the power-reserve indicators for the movement and strikework barrels, the position of the winding crown (winding, alarm setting, handsetting), the selection of the strikework mode (Grande Sonnerie, Petite Sonnerie, or Silence) as well as a bell-shaped aperture for the alarm ON/OFF display and a small round window for the strikework isolator (disabled/enabled) display.

### **The round double-face case: a grand reversible construction**

The term grand complication is used for movements that feature several highly elaborate complications. In analogy, the expression *grande construction* is justified for watch cases that require the utmost in creativity from master artisans specialized in design, completion, and decoration. More than any other watch, this applies to the case of the Grandmaster Chime. It took four years to develop. The result: the Grandmaster Chime is a round double-face watch that can be worn either way without compromise because it has two absolutely coequal dials. The secret lies in the lugs and the ingenious reversing mechanism, which is not only remarkably easy to operate but also firmly and dependably secures the case in the selected orientation. In the Grandmaster Chime, the skills of the casemakers are ennobled by the hand of a master engraver who invests several hundred hours of work to decorate it. He adorns the rose-gold case with relief engravings of a special anniversary laurel foliage motif and with a sharp burin chisels the inscriptions and symbols that explain the functions of the operating elements into the caseband, so that the complex timepiece can easily be operated without an instruction booklet. The laurel wreath is a symbol of triumph which since time immemorial has adorned the heads of victors and regents. At Patek Philippe, it is reserved for the seven Grandmaster Chime timepieces that commemorate the manufacture's 175th anniversary.

The Grandmaster Chime is delivered in a chest made of Makassar ebony and 17 further wood species. It is decorated with intarsia and gold inlays. Apart from the watch, it contains the accompanying documentation and a commemorative medal in gold that depicts milestones of





the manufacture's history as well as portraits of the company's presidents from the Stern family since 1932.

The Patek Philippe Grandmaster Chime celebrates the 175th anniversary of the manufacture in a limited edition of seven watches. Six of them will be sold to long-standing collectors of Patek Philippe timepieces. The seventh one will find a place of honor at the Patek Philippe Museum where it can be admired by the public.

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## Technical data

### Patek Philippe Grandmaster Chime Ref. 5175

#### Movement

Caliber GS AL 36-750 QIS FUS IRM.

Manually wound mechanical movement, 20 complications, chiming mechanism with 3 gongs and 5 different time strikes (Grande and Petite Sonnerie, minute repeater, alarm with time strike, date repeater); second time zone with day/night indicator; instantaneous perpetual calendar (date on both sides, day of week, month, leap-year cycle, four-digit year display, 24-hour and minute subdial, moon phases, strikework mode display, strikework isolator display, alarm ON/OFF, crown position indicator, and power reserve indicators for the movement and the strikework

Diameter:	37 mm
Height:	10.7 mm
Number of parts:	1366
Number of jewels:	108
Number of bridges:	32
Movement power reserve:	Min. 72 hours
Strikework power reserve:	30 hours
Balance:	Gyromax <sup>®</sup>
Frequency:	25,200 semi-oscillations per hour (3.5 Hz)
Balance spring:	Spiromax <sup>®</sup>

Functions:	<p>3-position crown</p> <ul style="list-style-type: none"> <li>• Pushed home: To wind the movement clockwise; to wind the strikework counterclockwise</li> <li>• Pulled halfway out: To set the alarm time</li> <li>• Pulled all the way out: To set the time</li> </ul> <p>• Strikework mode selector at 9 o'clock</p>
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Time dial displays:	Local time in hours and minutes, hours in a second time zone, alarm time, analog perpetual date, moon phases, strikework power-reserve indicator, movement power-reserve indicator, strikework mode display, crown position indicator, strikework isolator display (chimes enabled/disabled), alarm ON/OFF
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Calendar dial displays:	24-hour and minute subdial, four-digit year display, three calendar subdials with analog indications for the day, month, date, and leap-year cycle
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Pushers:	Pushers for the second time zone ("+" and "-"), alarm, minute repeater
Correction push pieces:	Year display ("+" and "-"), date, month, day, moon phases
Hallmark:	Patek Philippe Seal

### Features

Case:	Round, with patented reversing mechanism on the axis from 12 to 6 o'clock, 18K rose gold, 214 parts, sapphire crystals on both sides, protected against dust and moisture, not water-resistant Laurel wreath motif on bezel, caseband and lugs relief-engraved by hand, hand-engraved function inscriptions and symbols on caseband and pushers
Case dimensions:	Diameter (10 to 4 o'clock): 47.4 mm Thickness (crystal to crystal): 16.1 mm
Time side dial:	18K gold, silvery white opaline, center with radially undulated guilloché pattern, applied 18K gold Roman numerals, Local time hour and minute hands in black nickel-plated 18K white gold, hour hand for second time zone in 18K rose gold Hands for alarm time, movement and strikework power-reserve indicators, strikework mode and crown position in 18K rose gold
Calendar side dial:	18K gold, silvery white opaline, center with polished gold frame for the four-digit year display Subsidiary dials for the 24-hour display, day, month, date, and leap-year cycle with black printed scales and black nickel-plated steel hands
Strap:	Alligator with large square scales, hand-stitched, dark brown, hand-patinated, fold-over clasp in 18K rose gold fully engraved by hand

PRESS



## **Patek Philippe Grandmaster Chime Ref. 5175**

### **Patents and innovations**

#### Patent: Alarm mechanism with time strike

Mechanism that acoustically indicates a preset alarm time with hour, quarter-hour, and minute strikes using the chiming mechanism of the minute repeater.

#### Patent: Isolation of the Grande Sonnerie in the Silence mode

Mechanism that totally uncouples the Grande Sonnerie from the movement when the Silence mode is selected, eliminating friction and thus power consumption.

#### Patent: Selection of strikework operating mode

Mechanism that allows the automatic time strike to be selected or disabled with a single slide switch: Grande Sonnerie, Petite Sonnerie or Silence. Formerly, two separate switches were needed to make these settings.

#### Patent: Date repeater

Mechanism that obtains date information from the perpetual calendar and forwards it to the repeating mechanism. Manufacture president Thierry Stern is the inventor.

#### Patent: Reversible wristwatch case

Wristwatch case with rotating and latching devices in the lugs, allowing it to be turned along the axis from 12 to 6 o'clock and locked in either of 2 positions.

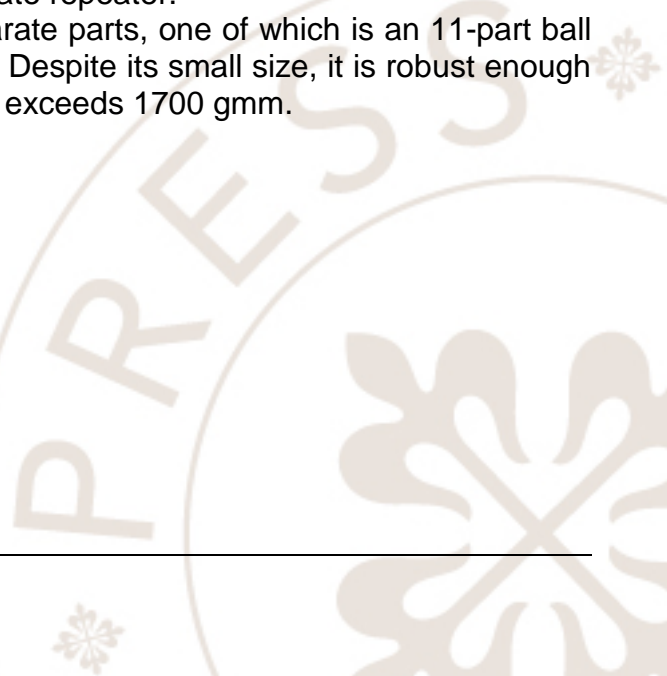
#### Patent: Mechanism for a four-digit year display

Mechanism that automatically synchronizes the four-digit year display with the leap-year cycle and allows convenient correction of both displays in either direction.

#### Innovation: The strikework differential

An innovative masterpiece of micromechanical engineering (not patented): the differential between the strikework double barrels and the two strikework mechanisms for the Grande Sonnerie (incl. minute repeater and alarm) and the date repeater.

It has a diameter of 7.2 mm and consists of 19 separate parts, one of which is an 11-part ball bearing with 7 balls with a diameter of 0.3 mm each. Despite its small size, it is robust enough to transmit the torque of the strikework barrels which exceeds 1700 gmm.





**Patek Philippe Grandmaster Chime Ref. 5175**  
**The 20 complications**

- 1 Grande Sonnerie
- 2 Petite Sonnerie
- 3 Minute repeater
- 4 Strikework mode display (Silence/Grand Sonnerie/Petite Sonnerie)
- 5 Alarm with time strike
- 6 Date repeater
- 7 Movement power-reserve indicator
- 8 Strikework power-reserve indicator
- 9 Strikework isolator display
- 10 Second time zone
- 11 Second time zone day/night indicator
- 12 Instantaneous perpetual calendar
- 13 Day-of-week display
- 14 Month display
- 15 Date display (on both dials)
- 16 Leap year cycle
- 17 Four-digit year display
- 18 24-hour and minute subdial
- 19 Moon phase
- 20 Crown position indicator (RAH)

