Automatic watches
L602 ................................................................. 68
L635 – 24 Time zones ........................................ 69
L636, L897 ....................................................... 71
L704.3 ............................................................. 72
L633, L888 – Diver Date .................................... 73
L699 – The Lindbergh Hour Angle Watch ............ 74
L699 – The Longines Weems Second-Setting Watch 76
L707 – 4X Retrograde ....................................... 77

Chronographs
General information ........................................ 80

Quartz chronographs
L440 .................................................................. 81
L442 .................................................................. 85
L538 .................................................................. 90

Automatic chronographs
L650, L651 .......................................................... 95
L688 – Column-Wheel ......................................... 96
L788 – Single Push-Piece Chronograph ............... 97
L789 – 24h/Single Push-Piece Chronograph ........ 97
L678, L687 – Phases of the Moon ......................... 98

You can download a PDF version of the instructions for use from our website www.longines.com
LONGINES is delighted that you should have chosen a model from our prestigious collection. The little technical marvel you now own will serve you faithfully for many years. The most advanced techniques were used during its manufacture, and it underwent stringent controls before it was released for sale.

Your LONGINES® watch is warranted by Longines Watch Co. Francillon Ltd* for a period of twenty-four (24) months from the date of purchase under the terms and conditions of this warranty.

The international LONGINES warranty covers material and manufacturing defects existing at the time of delivery of the purchased LONGINES watch (“defects”). The warranty only comes into force if the warranty certificate is dated, fully and correctly completed and stamped by an official LONGINES dealer (“valid warranty certificate”). During the warranty period and by presenting the valid warranty certificate, you will have the right to have any defect repaired free of charge. In the event that repairs are improper to restore the normal conditions of use of your LONGINES watch, Longines Watch Co. Francillon Ltd guarantees its replacement by a LONGINES watch of identical or similar characteristics. The warranty for the replacement watch ends twenty-four (24) months after the date of purchase of the replaced watch.

This manufacturer’s warranty does not cover:
- the life of the battery;
- normal wear and tear and aging (e.g. scratched crystal; alteration of the colour and/or material of non metallic straps and chains, such as leather, textile, rubber; peeling of the plating);
- any damage on any part of the watch resulting from abnormal / abusive use, lack of care, negligence, accidents (knocks, dents, crushing, broken crystal, etc.), incorrect use of the watch and non-observance of the use directions provided by Longines Watch Co. Francillon Ltd;
- the LONGINES watch handled by non-authorized persons (e.g. for battery replacement, services or repairs) or which has been altered in its original condition beyond Longines Watch Co. Francillon Ltd’s control.

ALL APPLICABLE IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE GIVEN TO YOU BY LAW ARE HEREBY LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. UNDER NO CIRCUMSTANCES WILL LONGINES WATCH CO. FRANCILLON LTD BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND.

Some states do not allow limitations on how long implied warranties last, or exclusions or limitations of incidental or consequential damages, so exclusions or limitations mentioned may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.
LONGINES WATCH CO. FRANCillon LTD’S OBLIGATION IS STRICTLY LIMITED TO REPAIR OR REPLACEMENT AS EXPRESSLY STATED IN THIS LIMITED WARRANTY. YOUR OFFICIAL LONGINES DEALER CARRIES SOLE RESPONSIBILITY FOR ANY OTHER GUARANTEES.

The Longines Watch Co. Francillon Ltd’s customer service ensures the perfect working order of your LONGINES watch. If your watch needs maintenance, rely on an official LONGINES dealer or an authorized LONGINES Service Center as set forth in the enclosed list: they can guarantee service according to Longines Watch Co. Francillon Ltd’s standards.

* Longines Watch Co. Francillon Ltd,
CH-2610 Saint-Imier, Switzerland.
©2002 Longines Watch Co. Francillon Ltd.
All rights reserved.

LONGINES® is a registered trademark.
NOTE: If you purchased your LONGINES® watch in Australia or New Zealand, the International LONGINES® Warranty contained in the booklet provided with this watch and on the LONGINES® website (www.longines.com) does NOT apply to you, and is replaced by this Australian/New Zealand Warranty (referred to below as the “Warranty”).

IMPORTANT NOTICE REGARDING YOUR CONSUMER RIGHTS

The benefits given to you under this Warranty are additional to, and do not detract from, other rights and remedies that you may have in relation to your LONGINES® watch and its purchase under Australian or New Zealand laws, including consumer protection laws.

In Australia, LONGINES® watches come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have your LONGINES® watch repaired or replaced if it fails to be of acceptable quality and the failure does not amount to a major failure.

In New Zealand, LONGINES® watches also come with guarantees that cannot be excluded under the New Zealand Consumer Guarantees Act.

This Warranty:

• Is not intended to change or exclude any statutory or consumer rights that cannot be lawfully changed or excluded;

• Is independent of any warranty that may be provided by the seller, for which he carries sole responsibility; and

• Does not affect your rights against the seller, including any mandatory statutory rights you may have against the seller under local consumer laws.

OUR WARRANTY TO YOU

This Warranty is provided by LONGINES WATCH CO. FRANCILLON LTD, CH-2610 Saint Imier, Switzerland.

Your LONGINES® watch is covered by this Warranty for a period of twenty-four (24) months from the date of purchase under the terms and conditions of this Warranty.

This Warranty covers material and manufacturing defects existing at the time of delivery of the purchased LONGINES® watch (“defects”). Where such defects become apparent during the warranty period and provided you present a valid warranty certificate, LONGINES WATCH CO. FRANCILLON LTD will:

• Repair your watch free of charge; or

• In the event that repairs are unable to restore the normal conditions of use of your LONGINES® watch, replace your watch with a LONGINES® watch of identical or similar characteristics. Such replacement watch will have the benefit of this Warranty for the remainder of the Warranty Period applicable to the original (replaced) watch.

Please be aware that:

• Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods;

• Any data you store in your watch may be lost in the course of a repair. It is your responsibility to back up any data that may be stored in your watch before presenting it for warranty service; and

• The Warranty is only valid if the warranty certificate enclosed with your LONGINES® watch upon purchase is dated, fully and correctly completed and stamped by an official LONGINES® retailer.
EXCLUSIONS AND LIMITATIONS
This Warranty does not cover:

• The lifetime of the battery;

• Normal wear and tear and aging (e.g. scratched crystal; alteration of the colour and/or material of non-metallic straps and chains, such as leather, textile, rubber; peeling of the plating);

• Any damage on any part of the watch resulting from abnormal/abusive use, lack of care, negligence, accidents (knocks, dents, crushing, broken crystal, etc.), incorrect use of the watch and non-observance of the use directions provided by LONGINES WATCH CO. FRANCILLON LTD;

• Indirect or consequential damages of any kind resulting from e.g. the use, the non-functioning, the defects or the inaccuracy of the LONGINES® watch; or

• Defects caused by the LONGINES® watch being handled by non-authorized persons (e.g. for battery replacement, services or repairs) or altered in its original condition beyond LONGINES WATCH CO. FRANCILLON LTD’s control.

HOW TO MAKE A CLAIM UNDER THIS WARRANTY
To make a claim under this Warranty, we recommend that you wrap your LONGINES® watch carefully so as to avoid any damage and send it with valid warranty by registered mail or drop it off in person to your nearest official LONGINES® retailer or an authorised LONGINES® Service Centre. To find current contact information for your nearest official LONGINES® retailer or authorised LONGINES® Service Centre, email customer.service@swatchgroup.com.au or go to www.longines.com.

You will be responsible for paying the expenses associated with making a claim under this Warranty, including postal or delivery expenses and any relevant taxes.

OTHER CONDITIONS
No official LONGINES® retailer or Service Centre is authorised to make any modification, extension or addition to this Warranty. LONGINES WATCH CO. FRANCILLON LTD provides no warranty against defects beyond the rights and remedies given under this Warranty and which are available under the Australian Consumer Law and the New Zealand Consumer Guarantees Act 1993.

LONGINES® is a registered trademark of LONGINES WATCH CO. FRANCILLON LTD
LONGINES is delighted that you should have chosen a model from our prestigious collection. The little technical marvel you now own will serve you faithfully for many years. The most advanced techniques were used during its manufacture, and it underwent stringent controls before it was released for sale.

Your LONGINES® watch is warranted by Longines Watch Co. Francillon Ltd* for a period of twenty-four (24) months from the date of purchase under the terms and conditions of this warranty.

The international LONGINES warranty covers material and manufacturing defects existing at the time of delivery of the purchased LONGINES watch (“defects”). The warranty only comes into force if the warranty certificate is dated, fully and correctly completed and stamped by an official LONGINES dealer (“valid warranty certificate”).

During the warranty period and by presenting the valid warranty certificate, you will have the right to have any defect repaired free of charge. In the event that repairs are improper to restore the normal conditions of use of your LONGINES watch, Longines Watch Co. Francillon Ltd guarantees its replacement by a LONGINES watch of identical or similar characteristics. The warranty for the replacement watch ends twenty-four (24) months after the date of purchase of the replaced watch.

This manufacturer’s warranty does not cover:
- the life of the battery;
- normal wear and tear and aging (e.g. scratched crystal; alteration of the colour and/or material of non metallic straps and chains, such as leather, textile, rubber; peeling of the plating);
- any damage on any part of the watch resulting from abnormal/abusive use, lack of care, negligence, accidents (knocks, dents, crushing, broken crystal, etc.), incorrect use of the watch and non-observance of the use directions provided by Longines Watch Co. Francillon Ltd;
- indirect or consequential damages of any kind resulting from e.g. the use, the non-functioning, the defects or the inaccuracy of the LONGINES watch;
- the LONGINES watch handled by non-authorised persons (e.g. for battery replacement, services or repairs) or which has been altered in its original condition beyond Longines Watch Co. Francillon Ltd’s control.

Any further claim against Longines Watch Co. Francillon Ltd e.g. for damages additional to the above described warranty is expressly excluded, except mandatory statutory rights the purchaser may have against the manufacturer.
The above manufacturer’s warranty is:
• independent of any warranty that may be provided by the seller, for which he carries sole responsibility;
• does not affect the purchaser’s rights against the seller nor any other mandatory statutory rights the purchaser may have against the seller.

The Longines Watch Co. Francillon Ltd’s customer service ensures the perfect maintenance of your LONGINES watch. If your watch needs attention, rely on an official LONGINES dealer or an authorised LONGINES Service Center as set forth in the enclosed list: they can guarantee service according to Longines Watch Co. Francillon Ltd’s standards.

* Longines Watch Co. Francillon Ltd,
CH-2610 Saint-Imier, Switzerland.
LONGINES® is a registered trademark.

CHECKS / SERVICES:
How often should my watch be checked?
We recommend that your watch’s water-resistance be checked every year (partial service with movement check).

How often should my watch be serviced?
Like any other precision instrument a watch should be serviced regularly to ensure that it runs perfectly. We cannot say how often you should have your watch serviced as this depends on the model, the climate where you live and how you look after the watch yourself. As a rule, a watch should be serviced every 4 or 5 years, depending on the conditions in which it is worn.

Where should I go to get my watch serviced or for a new battery?
We recommend that you go to an approved LONGINES agent or retailer. They are the only people who have the necessary tools and apparatus to work on your watch and to carry out the necessary checks to a professional level. Moreover, only specialists can guarantee that their work meets the stringent quality standards set by LONGINES.
What can I do to ensure that my LONGINES watch functions perfectly for many years?

**Magnetic fields:** avoid placing your watch in the vicinity of magnetic fields. These invisible fields may originate from sources such as hard drives, medical devices, speakers, televisions and refrigerator doors. Cases for mobile phones, tablets and laptops, as well as magnetic fasteners on handbags and purses, are also powerful sources of magnetic fields.

**Salt-water:** always rinse your watch in fresh water after swimming in the sea.

**Shocks:** avoid subjecting your watch to shocks, including sudden changes in temperature.

**Screw-in crown:** always make sure you have screwed the crown in fully to avoid any humidity getting into the mechanism.

**Push-in crown:** always push the crown back in to the neutral position to avoid any humidity getting into the mechanism.

**Cleaning:** use a toothbrush and soapy water to clean metal bracelets and water-resistant cases and a soft cloth to dry off afterwards.

**Chemical products:** avoid all direct contact with solvents, detergents, perfume, cosmetics, etc. which may damage the bracelet or strap, the case or the seals.

**Temperatures:** avoid exposing your watch to extreme temperatures (over 60°C or 140°F and under 0°C or 32°F) and to sudden fluctuations in temperature.

**Water-resistance:** we cannot guarantee that your watch will be permanently water-resistant. The seal may be affected by wear or by an accidental shock to the crown. As recommended in our service instructions, you should have the water-resistant seals of your watch tested once a year by an approved LONGINES agent.

**Chronograph push-pieces:** do not adjust the push-pieces under water as this may allow humidity to get into the mechanism.

**TOLERANCES / WINDING**

**Mechanical movements**
The precision of a mechanical movement varies depending on the wearer’s habits. The majority of LONGINES watches have a precision of between –5 and +15 seconds per day.

**Winding** (crown pushed right in)
The natural movements of your wrist will automatically wind your Longines watch, which has a power reserve of several dozen hours (see table of equivalents on p. 58-59). It is only necessary to wind it manually if your watch/chronograph has not been worn for one or more days.

**Occasional winding:** if your watch has not been worn for one or more days, wind it manually with the crown in position 1.
QUARTZ MOVEMENTS

The ambient temperature affects the precision of a quartz movement, which will be between –0.3 and +0.5 second per day.

If you have a quartz watch the electrical power is supplied by a battery. After 12 to 18 months of use (with the exception of watches with lithium batteries) the voltage in the battery may drop suddenly and cause your watch to stop. Some models have a battery end-of-life function. The seconds hand will start to jump every 4 seconds. If this happens we recommend that you replace the battery immediately, because once the battery runs down totally it may damage your watch.

Collection and treatment of end of life quartz watches*

This symbol indicates that this product should not be disposed with household waste. It has to be returned to a local authorised collection system. By following this procedure you will contribute to the protection of the environment and human health. The recycling of the materials will help to conserve natural resources.

*Valid in the EU member states and in any countries with corresponding legislation.

Replacing the battery

We recommend that you contact an approved LONGINES service centre or authorised LONGINES retailer, as they are equipped with the tools and apparatus required to carry out the work and the necessary checks in a professional manner. A worn-out battery should be replaced immediately in order to reduce the risk of leakage and consequent damage to the movement.

Battery type

Button-type zinc-silver oxide primary battery cell.
TABLE OF EQUIVALENTS

* Only calibres with more than 3 hands and the date. For other calibres, see pages 65-66

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Calibre*</th>
<th>Collection</th>
<th>Power reserve</th>
<th>Page</th>
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</thead>
<tbody>
<tr>
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<td>L651</td>
<td>The Longines Master Collection</td>
<td>42h</td>
<td>95</td>
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<td>69</td>
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<td>L650</td>
<td>evidenza</td>
<td>42h</td>
<td>95</td>
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<td>54h</td>
<td>98</td>
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<td>L678</td>
<td>The Longines Master Collection</td>
<td>48h</td>
<td>98</td>
</tr>
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<td>L699</td>
<td>The Lindbergh Hour Angle Watch</td>
<td>46h</td>
<td>74</td>
</tr>
<tr>
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<td>The Longines Master Collection</td>
<td>42h</td>
<td>68</td>
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<tr>
<td>L2.713.</td>
<td>L699</td>
<td>The Longines Weems Second Setting Watch</td>
<td>46h</td>
<td>76</td>
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<td>L707</td>
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<td>48h</td>
<td>77</td>
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<td>L707</td>
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<td>77</td>
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<td>L688</td>
<td>Conquest</td>
<td>54h</td>
<td>96</td>
</tr>
<tr>
<td>L2.751.</td>
<td>L704.3</td>
<td>Longines Twenty-Four Hours</td>
<td>46h</td>
<td>72</td>
</tr>
<tr>
<td>L2.752.</td>
<td>L688</td>
<td>The Longines Saint-Imier Collection</td>
<td>54h</td>
<td>96</td>
</tr>
<tr>
<td>L2.755.</td>
<td>L636</td>
<td>The Longines Master Collection</td>
<td>38h</td>
<td>71</td>
</tr>
<tr>
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<td>L688</td>
<td>The Longines Master Collection</td>
<td>54h</td>
<td>96</td>
</tr>
<tr>
<td>L2.773.</td>
<td>L687</td>
<td>The Longines Master Collection</td>
<td>54h</td>
<td>98</td>
</tr>
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<td>L688</td>
<td>Conquest Classic</td>
<td>54h</td>
<td>96</td>
</tr>
<tr>
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<td>L789</td>
<td>The Longines Twenty-Four Hours Single Push-Piece Chronograph</td>
<td>54h</td>
<td>97</td>
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<tr>
<td>L2.800.</td>
<td>L788</td>
<td>The Longines Column-Wheel Single Push-Piece Chronograph</td>
<td>54h</td>
<td>97</td>
</tr>
<tr>
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<td>L788</td>
<td>The Longines Column-Wheel Single Push-Piece Pulsometer Chronograph</td>
<td>54h</td>
<td>97</td>
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<td>L788</td>
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<td>54h</td>
<td>97</td>
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<td>L688</td>
<td>The Longines Avigation Big Eye</td>
<td>54h</td>
<td>96</td>
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<td>L888</td>
<td>The Longines Skin Diver Watch</td>
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<td>73</td>
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The reference number of your watch is engraved on the case-back.
* Only calibres with more than 3 hands and the date. For other calibres, see pages 65-66

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Calibre*</th>
<th>Collection</th>
<th>Power reserve</th>
<th>Page</th>
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</thead>
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<td>L3.379</td>
<td>L538</td>
<td>Conquest</td>
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<td>Conquest</td>
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<td>67</td>
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<td>54h</td>
<td>96</td>
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<td>96</td>
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<td>L636</td>
<td>Flagship</td>
<td>38h</td>
<td>71</td>
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<td>L688</td>
<td>Flagship</td>
<td>54h</td>
<td>96</td>
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</tbody>
</table>

The reference number of your watch is engraved on the case-back.
### Movement
- Quartz
- Automatic
- Column-wheel movement
- Manual

### Water-resistance
- Water-resistant to 3 bar (30 m)*
- Water-resistant to 5 bar (50 m)*
- Water-resistant to 30 bar (300 m)*

### Case material
- Stainless steel
- Gold 18K
- PVD
- Stainless steel/PVD
- Stainless steel/Gold 18K
- Stainless steel/Gold Cap 200
- Stainless steel/Gold Cap 200

### Glass
- PMMA HT (Polymethyl methacrylate)
- Sapphire
- Sapphire crystal with a single layer of anti-reflective coating on the underside
- Sapphire crystal with several layers of anti-reflective coating on the underside

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### Miscellaneous

<table>
<thead>
<tr>
<th>Cal.</th>
<th>Caliber</th>
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<td>EOE</td>
<td>For End of Life feature</td>
</tr>
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- Distance between lugs
- Convention on International Trade in Endangered Species of Wild Fauna and Flora
- Transparent case back
- Transparent case back with back cover
- Screw-down case back
- Screw-in crown
- Screwed bezel
- Single push-piece crown
- Rotating bezel
- Tachymeter
- COSC
- V.H.P.
- Silicium
- Antimagnetic **
- Perpetual calendar
- Correcting point
- Number and carat weight of Top Wesselton VVS Diamonds
- Number and carat weight of Top Wesselton VS or SI Diamonds
- Mother-of-pearl dial
- Super-LumiNova®
- Deployment buckle
- Additional booklet
- 1/100 second

---

* The values given in meters for the water-resistance are equivalent to the degree of superpressure applied under the ISO 22810 norm.
** ISO 764
• Excellent resistance to water and wear
• Superb mechanical properties
• Very good resistance to aggressive and extreme environments
• Incomparable suppleness and softness to the touch

1. Detach the two covers over the clasp by pressing on the bars.

2. Measure the circumference of your wrist by wrapping the strap round it. Half the number of holes that overlap indicates the length that suits your wrist.

   Example: half resulting in an even number: 8 overlapping holes, half of 8 is 4, remove 2 holes on each section.

   Half resulting in an odd number: 14 overlapping holes, half of 14 is 7, remove 4 holes on the section of the strap at 12 o’clock and 3 holes on the section at 6 o’clock.

3. Cut along the corresponding graduations.

4. Reinsert the bars in the two sections of the strap.

5. Attach the sections to the clasp so that the graduations are on the inside, i.e. against your skin, insert the bars in the holes closest to the centre of the clasp.

6. Try your watch on.

7. For the final adjustment, move the bar to one of the holes in the clasp. If the strap is too long, you can remove another hole.

---

We recommend that, if necessary, you have the length of your strap adjusted by a Longines agent.

We recommend that you wash your rubber strap regularly with soap and water, especially on the inside.
DEPLOYMENT BUCKLE

Adjusting the clasp

1. Release the adjusting mechanism by removing the pin from the hole in the long section of the strap.

2. Slide the mechanism along this long section and then fix it by reinserting the pin in the desired hole.

Opening the clasp

3. To open the clasp press in the push-pieces on either side simultaneously.

4. Open the clasp to enlarge the bracelet and remove the watch from your wrist.

Closing the clasp

5. Put the bracelet on your wrist and slide the long section through the small fixed buckle.

6. Close the folding clasp until it clicks into place. If necessary, slide the long section through the small mobile buckle.
Longines bows to the paragon of beauty: the diamond

This certificate of authenticity guarantees the quality of each precious stone selected by Longines’ specialists.

**The cut:** Longines diamonds are cut in the traditional brilliant style.

**The purity:** the degree of purity of a Longines diamond is VVS (very very small inclusions). This means that it may include minute imperfections which are hardly visible under tenfold magnification (VVS).

**The colour:** the colour of the diamonds used by Longines is Top Wesselton.

**The weight:** the weight of a diamond is measured in carats, one carat being equal to one fifth of a gram.
Precautions regarding water-resistance
If your watch is water-resistant it is essential that the seals be checked each year before the bathing season because, without your realising it, they might have been damaged as the result of a shock.

If the case has to be opened for any reason, the seals for the glass and the case-back as well as the crown (and/or push-pieces) must be checked and, if necessary, replaced.

Screw-in crown and push-pieces
Certain Longines models have a screw-in crown which has to be unscrewed before each adjustment by turning it anti-clockwise (fig. ①).

After use, return the crown to position 2, then push in and screw in firmly in position 1 to ensure that the seal with the case is water-resistant (fig. ②).

Important! You should always push the crown (and/or the push-pieces) right in and screw in firmly to ensure a water-resistant seal with the case. The crown (and/or push-pieces) should never be adjusted if the watch is in a humid atmosphere.
Model with Hour and Minute Hands
2-position crown

Adjusting the time
Pull the crown right out to position 2. Adjust the hands by turning the crown in either direction. Push the crown back in to position 1.

ADJUSTING THE TIME – GENERAL INFORMATION

Model with Hour, Minute Hands and Date
3-position crown

Adjusting the time
Pull the crown right out to position 3. Adjust the hands by turning the crown in either direction. Push the crown back in to position 1.

Quick date adjustment (standard)
Pull the crown out to the intermediate position 2. Adjust the date by turning the crown forwards (clockwise), then push the crown back in again to position 1. It is necessary to adjust the date after each month with less than 31 days.

Automatic watches require manual winding following a long period of inactivity.

It is not possible to adjust the date between 8.00 p.m. and 3.00 a.m.
Model with Hour, Minute, Seconds hands and Date 3-position crown

Applies to all watches that do not feature in the table of equivalents on pages 58-59.

Adjusting the time and stop seconds (standard)
To synchronise the watch with the official time signal (radio, telephone, etc.), pull the crown to its furthest position 3, at the moment when the small seconds hand is at 60, then push the crown back in again to position 1 at the time signal. Set the time by turning the crown in the desired direction.

The calendar changes every time the hour hand passes midnight.

Quick date adjustment (standard)
Pull the crown out to the intermediate position 2. Adjust the date by turning the crown forwards (clockwise), then push the crown back in again to position 1. It is necessary to adjust the date after each month with less than 31 days.

Power-reserve indicator
Certain watches have a power-reserve indicator (calibre L602).
If the watch is worn rarely or not at all, the hand will gradually shift anti-clockwise. When it indicates that the power-reserve is below 1/4, the watch should either be wound or worn to avoid it stopping.
When the watch is wound the power-reserve indicator will shift clockwise.
Hour, minute, seconds, date and moon phase display.

3-position crown

Adjusting the time and stop seconds
(See page 66)

Quick date and moon phase adjustment
Pull the crown out to the intermediate position 2. Turn the crown forward to correct the date, and backward to correct the moon phase, and then push the crown fully back in again (pos. 1). The date needs to be corrected after every month shorter than 31 days.
L602

Shows the hours, minutes, seconds and date, as well as the power-reserve.

**3-position crown**

*Adjusting the time and stop seconds*
(See page 66)

*Quick date adjustment*
(See page 66)
Shows the hours, minutes, seconds and date, as well as the time in the 24 time zones where there is a reference point (Longines patent no. 02266/92-3).

**3-position crown**

**Adjusting the time and stop seconds**

Pull the crown right out to position 3. The seconds hand will now stop. Adjust the time by turning the crown in either direction. When the crown is turned the 24-hour disc also turns. Synchronise your watch with a time signal (telephone, radio, TV) and then push the crown back in to position 1.

**Adjusting the time zone and the date**

Pull the crown out to the intermediate position 2. Turn the crown forwards or backwards to adjust the hour hand in the corresponding direction by successive jumps of one hour, which will not affect the minute or seconds hands.

When the hour hand passes midnight, the date will change automatically, indicating either the next day or the day before, depending on the direction you turn the crown. It is necessary to adjust the date at the end of each month with less than 31 days. Push the crown back in to position 1.
How to use your Longines 24 time zone watch
Pull the crown right out to position 3. The seconds hand will now stop.

Turn the crown in either direction so that your local time (winter time) is displayed on the 24-hour disc opposite the town in the time zone where you are.

Push the crown back in to the intermediate position 2 and adjust the hour hand to local time, checking that the date jumps at midnight.

Push the crown back in to position 1.

Your watch now shows universal time on the 24-hour disc and local time by the hands.

Example: 23 February, Paris, GMT (London) is at 12 o’clock, the hands show 10 hours and 8 minutes and on the disc the 10 is opposite Paris.

How to use when travelling
Pull the crown out to the intermediate position 2.

Adjust the hour hand to correspond to the time zone of the town where you are (see table of towns).

Push the crown back in to position 1.

Certain countries have summer time; to adjust your watch, carry out the same procedure.

Example: 23 February, Tokyo, GMT (London) is at 12 o’clock, the hands show 18 hours and 8 minutes and on the disc the 10 is opposite Paris: this means that it is 10.08 a.m. in Paris.
Shows the hours, minutes, seconds, date and day.

**3-position crown**

**Adjusting the time and stop seconds**
(See page 66)

**Quick date and day adjustment**
Pull the crown out to the intermediate position 2. Turn it **forwards** (clockwise) to adjust the date, **backwards** to change the day, and then push it back in again to position 1. It is necessary to adjust the date after each month with less than 31 days.

Shows the hours, minutes, seconds, date and month.

**3-position crown**

**Adjusting the time and stop seconds**
(See page 66)

**Quick date and month adjustment**
Pull the crown out to the intermediate position 2. Turn it **forwards** (clockwise) to adjust the date, **backwards** to change the month, and then push it back in again to position 1. A manual correction is required upon the February to March month change. After 30-day months, it takes 5 hours for the mechanism to reach the 1st of the next month. Do not make any quick month adjustments on the 30 and/or a quick date or month adjustment between 9 p.m. and 5 a.m., as this could damage the mechanism.
Shows the hours, minutes, seconds and date.

**3-position crown**

**Adjusting the time and stop seconds**

(See page 66)

**Quick date adjustment**

Pull the crown out to the intermediate position 2. Turn the crown forwards until the desired date is shown, then push the crown back in to position 1. It is necessary to adjust the date after each month with less than 31 days.
Your Longines Legend Diver Watch has 2 crowns, A and DIVER, which can be used for specific functions (fig. 1).

Shows the hours, minutes, seconds and date and also enables the user to check his or her diving time.

Crown A: 3 positions

Adjusting the time and stop seconds
Unscrew crown A and pull it out to position 3. The seconds hand will now stop. Adjust the time by turning the crown in either direction. Synchronise your watch with a time signal (telephone, radio, TV) and then push the crown A back in to position 1, and screw in firmly.

Adjusting the date
Unscrew crown A and pull it out to the intermediate position 2. Turn it forwards until it shows the desired date. Push crown A back in to position 1 and screw in firmly.

DIVER screw-in crown

Verifying your diving time
Unscrew the DIVER crown. When you start diving turn the rotating bidirectional ring to adjust the needle to the minute hand. Push the crown back in again and then screw in firmly (fig. 2).

You can read off your diving time from the minute hand on the graduations of the rotating bidirectional ring (fig. 3).

The example shows: 15 minutes diving time.
The original Lindbergh Hour Angle Watch was designed by Charles Lindbergh as a navigational aid for pilots. Used with a sextant and a nautical almanac, this watch enables the wearer to quickly determine the hour angle from Greenwich, in other words his or her longitude.

Thanks to its ingenious combination of dials, this time-piece differs from an ordinary watch in three ways:

A The indications on the dial are designed in such a way that they show simultaneously the time (in hours, minutes and seconds) and the hour angle (in degrees and minutes of arc).

B The rotating central dial shows the seconds and it can be turned using the crown in order to synchronise the watch with a time signal.

C The bezel can be rotated to correct the equation of time (which varies from one day to the next).

**3-position crown**

**Adjusting the time and stop seconds**

(See page 66)

**Synchronising the watch with a time signal**

In the intermediate position 2, the crown can be used to turn the central dial (in either direction). Pull the crown out to the intermediate position 2 and turn the central dial so that the seconds hand points to the “60/15” position on the last pip of the time signal. Push the crown back in to position 1.

**Push-piece D at 4 o’clock**

This is for opening the case back, thus revealing the movement through a protective sapphire glass.
The space/time dial and how it works
The design of the whole of The Lindbergh Hour Angle Watch takes into account the fact that the Earth revolves through 360° in 24 hours, through 180° in 12 hours, through 15° in 1 hour and through 15' of arc in 1 minute.

Consequently:
The hour hand indicates 15° per hour. One complete circle of the dial (12 hours) is equivalent to 180°.

The minute hand indicates 1° per 4', in other words 15° per hour. Each of the 15° is subdivided into four sectors of 15' of arc. All these indications are engraved on the rotating bezel.

One complete circle of the centre seconds is equivalent to 15' of arc. The rotating central dial is divided into 60'' and 15' of arc.

How to use your The Lindbergh Hour Angle Watch
Having synchronised your watch with a time signal. As an example when you check it your watch shows 4 hours, 37 minutes and 12 seconds. The equation of time for the day in question is minus 4 minutes and 50 seconds.

Therefore move the marker situated at “15” on the bezel 4 graduations to the left. These graduations represent the minutes engraved around the case.

Your data are as follows:

<table>
<thead>
<tr>
<th>Seconds hand (centre dial)</th>
<th>3'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minute hand (bezel)</td>
<td>10° 15'</td>
</tr>
<tr>
<td>Hour hand (main dial)</td>
<td>60°</td>
</tr>
</tbody>
</table>

As you have only turned the bezel by 4 minutes, you still have to take into account the 50 seconds (the equation of time being 4 minutes and 50 seconds for the day in question).

On the central dial, the 50 is opposite 12½ ./. 12½'

Greenwich hour angle of the sun (your longitude) 70° 5½'
Shows the hours, minutes and seconds. The central rotating dial indicates the seconds; it can be adjusted to synchronise the watch with a time signal using the crown, without affecting the seconds, minutes and hours.

**3-position crown**

**Adjusting the time and stop seconds**
(See page 66)

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**Synchronising the watch with a time signal**

In the intermediate position 2, the crown can be used to turn the central dial (in either direction). Pull the crown out to the intermediate position 2 and turn the central dial so that the seconds hand points to the “60” position on the last pip of the time signal. Push the crown back in to position 1.

**Push-piece A**

This is for opening the case back thus revealing the movement through a protective sapphire glass.
Shows the hours and minutes, small seconds in a retrograde display, the day, the date and the time in a second time zone, together with Moon-phase and day/night indications.

**3-position crown**

The crown can be used not only to adjust the hour, minute and seconds hands but also interdependently the day, date and time in a second time zone.

**Adjusting the time and stop seconds**

To synchronise the watch with the official time signal (radio, telephone, etc.), pull the crown to its furthest position 3, at the moment when the small seconds hand is at 60, then push the crown back in again to position 1 at the time signal. The calendar changes every time the hour hand passes midnight.

This adjustment will also affect the time in a second time zone, as well as the day and date each time the hand passes midnight, the adjustment being effected when the crown is pushed back in to position 1. The day, date and 24-hour time zone indicators are excluded from the retrograde sectors when the crown is pulled out to position 3.

**Quick time adjustment**

Pull the crown out to the intermediate position 2. Turn it in either direction. The hour hand will jump forwards by 1 hour at a time without affecting the minute or seconds hands. Then push the crown back in to position 1. This adjustment will also affect the day and date each time the hand passes midnight, the adjustment being effected when the crown is pushed back in to position 1. The day, date and 24-hour time zone indicators are excluded from the retrograde sectors when the crown is pulled out to position 2.

**Adjusting the time (a.m./p.m.)**

The dial is divided into 12 hours. The date and the day of the week change only once every 24 hours (each time the hour hand completes two circles of the dial).

In order to ensure that the date and day change at midnight, please follow the instructions below before changing the date and the day of the week.
Note the day of the week indicated on the dial.

Pull the crown out to position 2 (Quick time adjustment) and turn it clockwise until the hour hand has completed one circle.

Push the crown back in to position 1 (Winding).

Check that the day of the week has changed.

If so, the watch will now indicate morning (a.m.). If the watch indicates morning but it is in fact afternoon pull the crown out to position 2 (Quick time adjustment) and turn it until the hour hand has completed one circle.

If, however, the day of the week has not changed, the watch will indicate afternoon (p.m.). If the watch indicates afternoon but it is in fact morning pull the crown out to position 2 (Quick time adjustment) and turn it until the hour hand has completed one circle.

Push the crown back in to position 1 (Winding).

**IMPORTANT! You will not see any changes on the dial when using the crown in positions 2 and 3.**

**24-hour indicator:** if you do not wish to use the Second time zone function you can convert it into a 24-hour indicator. This will enable you to avoid this step in the future.

See under: Synchronising the time in a second time zone / 24-hour indicator.

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**The functions of the 3 push-pieces**

The 3 push-pieces can be used when the crown is in any position.

**Adjusting the day of the week**

Press push-piece A to adjust the day of the week.

**IMPORTANT! Do not change the date or use the push-pieces A (for the day) or B (for the date) between 9 p.m. and 3 a.m. as doing so may damage the mechanism.**

**Adjusting the date**

Press push-piece B to adjust the date.
Adjusting the time in the second time zone
(24-hour hand)
Press push-piece \( \text{C} \) to adjust the time in the second time zone by successive steps of 1 hour, which will not affect the minute and seconds hands.

Example: you are on Geneva time (home) and it is 8 a.m. You know that there is an 8-hour difference between Switzerland and Japan.

Moon-phase correction
Press corrector \( \text{D} \) until the full moon appears in the centre of the Moon-phase display. Calculate the date of the last full moon, and press corrector \( \text{D} \) again as many times as the number of days that have passed since the last full moon. Do not correct the Moon-phase between 3 p.m. and 6 p.m. as this function is not active during this period.

Synchronising the time in the second time zone / the 24-hour hand
To synchronise the time in the second time zone with the actual time where you are, use push-piece \( \text{C} \). If the watch stops you will immediately see from the time in the second time zone whether your watch is showing morning (a.m.) or afternoon (p.m.).

Please note that if you use the Quick time adjustment function (crown in position \( \text{2} \)), the synchronisation will be interrupted.

Option a: you leave your watch on Geneva time and date. You press push-piece \( \text{C} \) to adjust the time in the second time zone so that the 24-hour hand is on 16 (4 p.m. Japanese time).

Option b: you travel to Japan and want your watch to show Japanese time and date. You adjust the time by turning the crown (in position \( \text{2} \)) clockwise so that the 24-hour hand is on the 4 (4 p.m. Japanese time). Then push the crown back in. The time shown in the second time zone will stay at 8 a.m. (Geneva time: home).
THE CHRONOGRAPH

The chronograph is an instrument for measuring short periods of time. It is used mainly in sport but also in aviation or for scientific experiments, for example.

The Column-Wheel

The column-wheel movement is reputed for the feeling of crisp efficiency its handling provides. In particular, the instant responsiveness of its pushpieces adds to the pleasure of using the chronograph.

Tachometric scale

Chronograph fitted with a scale allowing speed to be read in kph.

Measure the time needed to cover 1 kilometre (or 1 mile). The position of the seconds hand when it stops indicates the mean speed. If it takes 30 seconds to cover 1 km (or 1 mile), the scale will indicate a mean speed of 120 kph (or 120 mph).

Pulsometer scale

A chronograph whose dial features a scale enabling the wearer to directly read their hear trate, by starting the chronograph and counting 30 beats.

Chronographs standard functions

Standard Start-Stop function

Add Rally function (partial times)

Used for timing a single event:

- Press push-piece A: to start the chronograph.
- Press push-piece A: to stop the chronograph.
- Press push-piece B to return to zero.

Add Rally function (partial times)

Used for measuring successive events but not the inter-vals between them. Each result is automatically added to the preceding one. To time the different stages of a car rally, for example:

- At the start of the first stage, press push-piece A to start the chronograph.
- At the end of the first stage, press push-piece A again and the chronograph will stop.
- Repeat this procedure for each stage of the rally.
- At the end of the final stage the chronograph will show the total time of the rally, in other words, the accumu-lated time for all the stages.
- Press push-piece B to return to zero.

IMPORTANT! The time should not be adjusted while the chronograph function is being used.
Longines’ quartz chronograph fitted with calibre L440 shows the local time (hours, minutes, small seconds), and the date in a window.

- Quick time zone and date adjustment.
- The hour and minute are displayed by the 2 big central hands.
- The small seconds are displayed on the counter at 6 o’clock.
- Rate precision ±0.07 seconds per day (PreciDrive).
- The 12-hour chronograph displays the hour, minute, seconds and hundredths of a second.
- Quick-moving chronograph counter hands.
- Electronic quartz movement with 5 motors and 7 hands.
- Hour with time zone mechanism.
- The time measurement and hand movements are managed by a micro-controller.
- The movement seconds are controlled by a PreciDrive Watch Module.

### 3-position crown

**Simple function**

In this function, with the crown in position 1, push-piece A is used to switch the chronograph status between START and STOP.

After START is pressed, the counter hands will show the measured time. The 1/100th of a SECOND counter hand will not turn.

After STOP has been pressed, the 60-SECOND, 30-MINUTE and 12-HOUR counter hands will stop running. The 1/100th of a SECOND counter hand will move to show the one hundredths of a second value.

To measure another time, press push-piece B to return the counters to zero (RESET). All the hands will quickly return clockwise to their start point, and the chronograph will switch back to watch mode.
Adjusting the time and stop seconds

Unscrew the crown if necessary.

To synchronise the watch with an official time signal (radio, telephone, etc.), pull the crown to its furthest position 3, at the moment when the small seconds hand is at 60, then push the crown back in again to position 1 at the time signal, and screw in.

The calendar changes every time the hour hand passes midnight.

Minute and seconds adjustment

After unscrewing the crown (if necessary) and pulling it to its furthest position 3, the 3 counter hands will move to the midday position. Turn the crown to correct the hour and minute hands. Turn the crown either way to correct the minute. Then push the crown back in again to position 1, and screw in.

Changing the time zone and the date

Unscrew the crown (if necessary), and pull it out to the intermediate position 2. The hour hand will make one-hour jumps, enabling quick time zone adjustments. The hour hand can be moved in either direction without affecting the minute and seconds hands. Turning the crown through 24 hours will cause a date change. The crown be turned either way. Then push the crown back in again to position 1, and screw in.

Chronograph functions

Standard Start-Stop function

Simple time measurement – Timing 100 metres.

ADD function (partial times)

Adds several times together – Timing periods of a hockey match or a stage race, for instance.

Split function (intermediate times)

This function is used to time intermediate race lap times in a single event. Intermediate times are accumulated throughout the event.

Standard Start-Stop function

Used for timing a single event:

- Press push-piece A: to start the chronograph.
- Press push-piece A: to stop the chronograph.
- Press push-piece B: to return to zero.

ADD Rally function (partial times)

Used for measuring successive events, but not the intervals between them. Each result is automatically added to the preceding one. To time the various stages of a car rally, for example:

- At the start of the first stage, press push-piece A to start the chronograph.
- At the start of the first stage, press push-piece A again and the chronograph will stop to 1/100th of a second.
- Repeat this procedure for each stage of the rally.
- At the end of the final stage the chronograph will show the total time of the rally, in other words, the accumulated time for all the stages.
- Press push-piece B to return to zero.
Split FUNCTION (intermediate times)
This function is used to time one single event. Intermediate times are accumulated throughout the event.

IMPORTANT! While the watch displays an intermediate time the chronograph function will still be timing the event.

- Press push-piece A at the start of the event you wish to time, for example a ski race.
- Press push-piece B to see the first intermediate time; the 60-second, 30-minute and 12-hour counter hands will stop, and the 1/100th of a second counter hand will move to the measured one hundredth.
- Press push-piece B again and the chronograph hands will jump to the correct time since the start of the race.

To see the second intermediate time, repeat the procedure.
- Press push-piece B once to see the second intermediate time measured to 1/100th of a second, and again to make the chronograph hands jump to the current time.
- At the end of the race, press push-piece A to see the total time for the race.
- Press push-piece B to return to zero.

NB: The split function / intermediate times can also be used to record consecutively the times of various competitors as they finish a race.

Resetting the chronograph hands
If for any reason the chronograph hands do not return exactly to zero, take the following action:

- Unscrew the crown if necessary.
- Pull the crown out to the intermediate position 2; the 4 CHRONO counter hands, 1/100th of a SECOND and 60-SECOND in the centre, 30-MINUTE at 2 o'clock and 12-HOUR at 10 o'clock, will return to their start point, normally the midday position.

If the watch was in RESET status, the hands are already zeroed. If there is a timing operation in progress, the hands will return to their start point. Then they will all complete one quick circle of the dial.

Pressing push-piece A will move the selected hand to indicate which hand will be moved by pressing push-piece B.

Each successive press on A selects the next hand.

A short press on push-piece B will move the selected counter one step clockwise.

Holding push-piece B for more than one second will move the hand in quick continuous rotation.
1. Chronograph 1/100th of a second counter (centre):
   With the crown in position 2, press push-piece B.

2. Chronograph 60-second counter (centre):
   With the crown in position 2, press push-piece A, and then adjust with push-piece B.

3. Chronograph 30-minute counter (at 2 o'clock):
   With the crown in position 2, press push-piece A, and then adjust with push-piece B.

4. Chronograph 12-hour counter (at 10 o'clock):
   With the crown in position 2, press push-piece A, and then adjust with push-piece B.

Then push the crown back in again to position 1, and screw in.

**IMPORTANT!** The time, or any other display, should not be adjusted while the chronograph function is being used.

**Important notes**

a) It is possible to combine the various Chrono functions (SIMPLE, ADD and SPLIT) in the same timing operation.

b) Unless the chronograph is stopped (STOP pressed), the chronograph hands will not stop moving. Continuous running of the chronograph will greatly reduce the autonomy of the movement.

**Battery end-of-life mode (E.O.L)**

If the battery voltage decreases and the risk of function loss arises, E.O.L mode is activated. If the voltage is below the E.O.L level, the chronograph functions are locked, and the small seconds at 6 o’clock is stopped.

E.O.L mode is activated if the battery voltage is below the E.O.L level for more than one hour. If the battery voltage climbs above the E.O.L level for more than 15 minutes, E.O.L mode is deactivated. This scenario may occur in particular if the watch has been temporarily exposed to low temperatures.

**In this mode:**

The small seconds hand moves jerkily. The hand moves 4 steps quickly, and then remains immobile for 4 seconds.

The chronograph can no longer be activated (START) for approximately one hour after E.O.L mode has been activated.

If the chronograph was active at this time, it will continue to run, though there could be step loss.
When used as a watch, the Longines L442 QUARTZ chronograph indicates a local time (hour, minute and small seconds), plus the date in a window, and features quick time zone adjustments.

In its chronograph function, this model can time events lasting up to 30 minutes, while displaying the results to the nearest 1/10th of a second. PowerDrive quick-moving chronograph counter hands. PreciDrive rate precision, earning COSC certification.

**PreciDrive calibre 251.294**
- Electronic quartz movement with 5 motors and 7 hands.
- Hour with time zone mechanism.
- The time measurement and hand movements are managed by a microcontroller.
- The movement seconds are controlled by a PreciDrive Watch Module, which transforms this calibre into a chronometer with a rate precision exceeding the COSC requirements.

**Timing mode**

**Simple function**
In this function, with the crown in position 1, push-piece A is used to switch the chronograph status between START and STOP.

After START is pressed, the counter hands will show the measured time. The 60-SECOND and SPLIT-SECONDS counters run simultaneously, indicating the measured time in seconds.

After STOP has been pressed, the 60-SECOND, SPLIT-SECONDS and 30-MINUTE counter hands will stop running. The 1/10th of a SECOND counter hand displays the value in tenths of a second as it runs.

To measure another time, press push-piece B to return the counters to zero (RESET). All the hands will quickly return clockwise to the start point, and the chronograph will go back to watch mode.

**Battery end-of-life mode (E.O.L)**
(See page 84)
**Resetting the counters / Crown in position 2**

Select counter to return to zero (selected hand moves)

Return selected hand to zero

**Time setting and corrections / Crown in position 2 or 3**

Correct the hour and minute hands, and correct the date every time the hour hand passes midnight

Date and time zone correction

Note: Time-setting crown in position 3: STOP SECONDS

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**Resetting the counters**

**Changing the time zone and the date**

Unscrew the crown if necessary.

Pull it out to the intermediate position 2. The hour hand will make one-hour jumps, enabling quick time zone adjustments. Turning the crown through 24 hours will cause a date change. The crown can be turned either way. Then push the crown fully back in again (pos. 1), and screw in.

**Time setting and corrections**

**Minute and seconds adjustment**

Unscrew the crown if necessary. Pull the crown out to its furthest position 3; the 3 counter hands will move to 12 o’clock. Turn the crown to correct the hour and minute hands. Turn the crown either way to correct the minute. When the crown has been pulled out to its furthest position, the movement seconds hand will be immobile. If the crown is pulled out when the movement seconds hand is pointing to the zero position, press the crown at the time signal to enable an accurate seconds correction.

Then push the crown fully back in again (pos. 1), and screw it in.
Chronograph functions

Standard Start-Stop function
Simple time measurement – Timing a 100 metres.

ADD function (partial times)
Adds several times together – Timing periods of a hockey match or a stage race, for instance.

SPLIT-SECONDS function
Measures intermediate race lap times.

MEMO function
Memorises intermediate times.

Standard Start-Stop function
Timing a single event:
- Press push-piece A: to start the chronograph.
- Press push-piece A: to stop the chronograph.
- Press push-piece B: to return to zero.

Rally ADD function (partial times)
This function starts like the SIMPLE function.

Used for measuring successive events, but not the intervals between them. Each result is automatically added to the preceding one.
To time the various stages of a car rally, for example:
At the start of the first stage, press push-piece A to start the chronograph.

After the first time measurement (STOP), provided that push-piece B (RESET) has not been pressed, you can RESTART (push-piece A) to add a new time to the previously measured time.

After STOP has been pressed, the 60-SECOND, SPLIT-SECONDS and 30-MINUTE counter hands will stop running. The 1/10th of a SECOND counter hand displays the value in tenths of a second as it runs.

After STOP (push-piece A) has been pressed, engage a RESET (push-piece B) to finish timing, and return the chronograph to watch mode.

At the end of the final stage the chronograph will show the total time of the rally, in other words, the accumulated time for all the stages.
Repeat this procedure for each stage of the rally.

Press push-piece B to reset.
SPLIT-SECONDS function or intermediate time

1. Start
2. Stop
   - Read intermediate time 1
     - 1 minute
     - 35 seconds
     - 6/10ths of a sec.
3. Restart
   - Split-seconds
4. Stop
   - Read intermediate time 2
     - 3 minutes
     - 5 seconds
     - 4/10ths of a sec.
5. Restart
   - Split-seconds
6. Stop
   - Read final time
     - 8 minutes
     - 11 seconds
     - 6/10ths of a sec.

Note: the maximum catch-up time can be 30 minutes (only chrono in the world with this ability).

1 to 7 order of functions

MEMO function

1. Start
2. Stop
   - Read intermediate time 1
     - 1 minute
     - 35 seconds
     - 5/10ths of a sec.
3. Restart
4. Stop
   - Read 2nd intermediate time
5. Stop
   - Read final time
6. Stop
   - 2 minutes
   - 10 seconds
   - 8/10ths of a sec.
7. Stop
   - Read last memorised intermediate time
8. Stop
   - Read final memorised time...
9. Stop
   - Re-read last memorised intermediate time
10. Stop
    - Re-read final memorised time...

1 to X order of functions
SPLIT-SECONDS function
Between START and STOP, press push-piece C to activate the SPLIT-SECONDS function. The SPLIT-SECONDS and 30-MINUTE counter hands will stop. The 1/10th of a SECOND counter hand will move to the nearest measured one tenth. Meanwhile, the 60-SECOND counter will not stop running.

After reading the measured time, press push-piece C to reactivate the measured time display. The SPLIT-SECONDS and 30-MINUTE counter hands will catch up to the positions corresponding to the ongoing elapsed time. The 1/10th of a SECOND counter hand will return to zero.

Pressing push-piece B before the chrono has been stopped will restart the counters at zero, and the intermediate time will be lost.

Pressing push-piece B after the chrono has been stopped will cause a RESET.

MEMO function
If STOP has been engaged during a SPLIT-SECONDS function, the counters will move to display the measured STOP time. Press push-piece C for a reminder of the previous intermediate time. Pressing this same push-piece again will display the final time again.

Pressing push-piece C alternates between the intermediate time display and final time display for the ongoing timing operation. This is the MEMO function.

After STOP has been engaged, pressing push-piece B will cause a RESET, and all the counters will return to zero. The timing operation will finish, and the chronograph will return to watch mode. If RESET is engaged before you have read the stop time, the 60-SECOND and SPLIT-SECONDS counter hands are not superimposed as they move to zero.

Note:
There is no possible confusion in reading the intermediate and stop times. When you read the chrono stop time, the 60-SECOND and SPLIT-SECONDS counter hands are actually superimposed, whereas for the intermediate time, they are never superimposed.

However, if a chrono STOP function occurs exactly one or more minute after an intermediate time (i.e. the 60-SECOND and SPLIT-SECONDS counters are indicating the same value), the 60-SECOND counter is deliberately offset by one position when reading the intermediate time in MEMO function. In this way the hands of these two counters are only superimposed for the stop time, and the rule above is obeyed.

Important notes
a) It is possible to combine the various Chrono functions (SIMPLE, ADD, SPLIT-SECONDS and MEMO) in the same timing operation. For example, during a MEMO function you can restart the time measurement (ADD) without losing the memorised time.

b) Unless timing is deliberately stopped (pressing STOP), the chronograph hands will keep running. Continuous running of the chronograph will greatly reduce the autonomy of the movement.

Hands initial positioning mode
The four chronograph counters are initialised to their start point digitally, by means of the push-pieces.

The four chronograph counter hands are positioned in sequence via the push-pieces with the crown pulled out to position 2.

After pulling the crown out to position 2, the four counter hands - SPLIT-SECONDS and CHRONO 60-SECOND in the centre, CHRONO 1/10th of a SECOND at 2 o'clock and CHRONO 30-MINUTE at 10 o'clock will move to their start point, normally zero, at 12 o'clock. The two centre hands will make this movement together. If the watch was in RESET status, the hands are already zeroed. If there is a timing operation in progress, the hands will move to their start point. Then they will all complete one quick circle of the dial. During this complete rotation, none of the hands will move at the same time. The first hand to make its rotation is the tenths hand, then the split-seconds hand, the chrono seconds hand and finally the chrono minute hand.

Pressing push-piece A will move the selected hand to indicate which hand will be moved by pressing push-piece B.

Each successive press on A selects the next hand.
How to use your Longines chronograph

When used as a watch, the Longines calibre L538 quartz chronograph shows the hour, minute, seconds and the date in a window.

In its chronograph function, this model can time events lasting up to 30 minutes, while displaying the results to the nearest 1/10th of a second.

- Quick time zone and date adjustment.
- The hour and minute are displayed by the 2 big central hands.
- The small seconds are displayed on the counter at 6 o'clock.
- The 30-minute chronograph displays the minute, seconds and tenths of a second.
- Quick-moving chronograph counter hands.
- Electronic quartz movement with 5 motors and 6 hands.
- Hour with time zone mechanism, minute and jumping small seconds.
- The time measurement and hand movements are managed by a microcontroller.

*PowerDrive technology:

PowerDrive controls the chronograph motors, and is able to boost the hand travel speed to more than 200 Hz (i.e. 200 hand jumps per second in both rotation directions).

This technology improves the hand movement control, which makes for a highly dynamic display. PowerDrive also enables numerous counter programming options.
3-position crown

Simple function
In this function, with the crown in position 1, push-piece A is used to switch the chronograph status between START and STOP.

After START is pressed, the counter hands will show the measured time. The 1/10th of a SECOND counter hand will not turn.

After STOP has been pressed, the 60-SECOND and 30-MINUTE counter hands will stop running. The 1/10th of a SECOND counter hand displays the value in tenths of a second as it runs.

To measure another time, press push-piece B to return the counters to zero (RESET). All the hands will quickly return clockwise to their start point, and the chronograph will switch back to watch mode.

Time setting and corrections
Unscrew the crown (if necessary), and pull it out to its furthest position 3. The watch will stop and the hour and minute hands can be adjusted for the time setting.

Hour, minute and seconds correction
Crown in position 3: the 3 counter hands will move to 12 o'clock. Turn the crown to correct the hour and minute hands. Turn the crown either way to correct the minute. Then push the crown fully back in again (pos. 1), and screw it in.

To synchronise the watch with an official time signal (radio, telephone, etc.), pull the crown to its furthest position 3, at the moment when the small seconds hand is at 60, then push the crown back in again fully (pos. 1) at the time signal, and screw it back in.

The calendar changes every time the hour hand passes midnight.

Changing the time zone and the date
Unscrew the crown (if necessary), and pull it out to the intermediate position 2. The hour hand will make one-hour jumps, enabling quick time zone adjustments. The hour hand can be moved in either direction without affecting the minute and seconds hands setting. Turning the crown through 24 hours will cause a date change. The crown can be turned either way. Then push the crown fully back in again (pos. 1), and screw it back in.

Note: do not leave the time-setting crown in position 2 for more than 20 minutes (time loss).
**Quartz chronographs**

**Chronograph functions**

- **Standard Start-Stop function**
  Simple time measurement – Timing a 100 metres.

- **ADD function (partial times)**
  Adds several times together – Timing periods of a hockey match or a stage race, for instance.

- **Split function (intermediate times)**
  This function is used to time intermediate race lap times in a single event. Intermediate times are accumulated throughout the event.

**Standard Start-Stop function**

Timing a single event:

- Press push-piece A to start the chronograph.
- Press push-piece A to stop the chronograph.
- Press push-piece B to reset.

**ADD Rally function (partial times)**

Used for measuring successive events, but not the intervals between them. Each result is automatically added to the preceding one. To time the various stages of a car rally, for example:

- At the start of the first stage, press push-piece A to start the chronograph.
- At the end of the first stage, press push-piece A again, and the chronograph will stop to $1/10$th of a second.

Repeat this procedure for each stage of the rally.

At the end of the final stage the chronograph will show the total time of the rally, in other words, the accumulated time for all the stages.

- Press push-piece B to reset.

**IMPORTANT!** While the watch displays an intermediate time the chronograph function will still be timing the event.
To see the second intermediate time, repeat the procedure:

- Press push-piece B once to see the second intermediate time measured to $1/10^{th}$ of a second, and again to make the chronograph hands catch up to the elapsed time.
- At the end of the race, press push-piece A to make the chronograph display the total race time.
- Press push-piece B to reset.

**NOTE:** The split/intermediate times function can also be used to record consecutively the times of various competitors as they finish a race.
Resetting the counters

Resetting the chronograph hands
If for any reason the chronograph hands do not return exactly to zero, take the following action:

- Unscrew the crown if necessary.
- Pull the crown out to the intermediate position 2; the 3 CHRONO counter hands, 1/10th of a SECOND at 2 o'clock, 60-SECOND in the centre and 30-MINUTE at 10 o'clock, will return to their start point, normally the midday position.

If the watch was in RESET status, the hands are already zeroed. If there is a timing operation in progress, the hands will return to their start point. Then they will all complete one quick circle of the dial.

Pressing push-piece A will move the selected hand to indicate which hand will be moved by pressing push-piece B.

Each successive press on A selects the next hand.
A short press on push-piece B will move the selected counter one step clockwise.

Holding push-piece B for more than one second will move the hand in quick continuous rotation.

1) Chronograph 30-minute counter (at 10 o'clock):
Crown in position 2, press push-piece A.

2) Chronograph 60-second counter (centre):
Crown in position 3, press push-piece A.

3) Chronograph 1/10th of a second counter (at 2 o'clock):
With the crown in position 3, press push-piece B.

Then push the crown fully back in again (pos. 1), and screw it back in.

**IMPORTANT!** The time, or any other display, should not be adjusted while the chronograph function is being used.

**Important notes**

a) It is possible to combine the various Chrono functions (SIMPLE, ADD and SPLIT) in the same timing operation.

b) Unless the chronograph is stopped (STOP pressed), the chronograph hands will not stop moving. Continuous running of the chronograph will greatly reduce the autonomy of the movement.

**Important:** Do not leave the crown in position 2 for more than 20 minutes, as this could interfere with the time function.

If your chronograph breaks down, it should be entrusted only to an approved Longines service centre.

**Battery end-of-life mode (E.O.L)**
(See page 84)
Shows the hours, minutes, seconds and date. Can be used to time events that last up to 12 hours, the results being shown to 1/5th of a second.

**3-position crown**

**Adjusting the time and stop seconds**  
(See page 66)

**Quick date adjustment**  
(See page 66)

**Chronograph standard functions**  
(See page 80)

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Shows the hours, minutes, seconds and date. Can be used to time events that last up to 30 minutes, the results being shown to 1/5th of a second.

**3-position crown**

**Adjusting the time and stop seconds**  
(See page 66)

**Quick date adjustment**  
(See page 66)

**Chronograph standard functions**  
(See page 80)
Shows the hours, minutes, seconds and date. Can be used to time events that last up to 12 hours, the results being shown to $\frac{1}{5}$th of a second.

**2-position crown**

**Adjusting the time and stop seconds**

(See page 66)

**Quick date adjustment**

Push-piece for adjusting the date is at 10 o’clock. Using the soft-pointed instrument provided by Longines, press the push-piece to obtain the exact date. It is necessary to adjust the date at the end of each month with less than 31 days.

**Chronograph standard functions**

(See page 80)
L788  
Single push-piece

Shows the hours, minutes, seconds and date. Can be used to time events that last up to 30 minutes, the results being shown to 1/5th of a second.

2-position crown

Adjusting the time and stop seconds  
(See page 66)

Quick date adjustment
Push-piece for adjusting the date is at 7 o’clock. Using the soft-pointed instrument provided by Longines, press the push-piece to obtain the exact date. It is necessary to adjust the date at the end of each month with less than 31 days.

Function
The functions of a single push-piece chronograph are activated via the crown only. To start the chronograph, press the crown once. When you press the crown again, timing will stop and you will be able to read the elapsed time. To reset the chronograph, press the crown again.

Important! Unlike a regular chronograph, once stopped, timing can no longer be restarted / continued. Simple timing is the only option.

L789  
24 h / Single push-piece

24-hour, minute, seconds and date display. Can be used to time events lasting up to 60 seconds, while displaying the results to the nearest 1/5th of a second.

3-position crown

Adjusting the time and stop seconds  
(See page 66)

Quick date adjustment  
(See page 66)

Function
The functions of a single push-piece chronograph are activated via the crown only. To start the chronograph, press the crown once. When you press the crown again, timing will stop and you will be able to read the elapsed time. To reset the chronograph, press the crown again.

Important! Unlike a regular chronograph, once stopped, timing can no longer be restarted / continued. Simple timing is the only option.
Shows the hours, minutes, seconds, day, month, date and phases of the Moon. Can be used to time events lasting up to 12 hours, showing the result to 1/5th of a second.

3-position crown

Adjusting the time and stop seconds
(See page 66)

Quick adjustment of the date and month
Pull the crown right out to position 2 and turn it backwards to adjust the date and month. Then push it back in to position 1. It is necessary to adjust the date at the end of each month with less than 31 days.

Adjusting the phases of the Moon
Pull the crown out to the intermediate position 2 and turn it forwards to adjust the phase of the Moon until the full moon appears at the centre of the phases of the Moon aperture. Determine the date of the last full moon using a diary or calendar indicating the dates of the full moon. Turn the crown forwards again to the position indicated on the table of lunar months.

IMPORTANT! The date and the phases of the Moon should not be adjusted between 7 p.m. and 6 a.m. as doing so may damage the mechanism.

Adjusting the day of the week
Push-piece C for adjusting the day of the week is situated at 10 o’clock. Using the soft-pointed instrument provided by Longines, press the push-piece to obtain the exact day.

Chronograph standard functions
(See page 80)