

THE VERY FIRST EXPERIMENTAL CONSTRUCTION OF THE *DOUBLE TOURBILLON 30°* SYSTEM BY **ROBERT GREUBEL AND STEPHEN FORSEY**. THIS "TOY" HELPED THEM TO VALIDATE THE FUNCTIONING PRINCIPLE OF THIS FUNDAMENTAL INVENTION PRESENTED IN 2004.

— KEITH W. STRANDBERG

LIKE A PHOENIX

THE STUNNING REBIRTH OF THE MECHANICAL WATCH

Not too long ago, the mechanical watch was dead. When the quartz watch was introduced in the 1970s, everyone thought that this had to be the death knell for the mechanical watch. After all, the quartz watch was cheaper and more accurate, the latest cutting edge technology.

Panic gripped the mechanical watch industry in Switzerland. Companies let their employees go, closed their doors and went home. Mechanical movements were packed away, put into storage and forgotten about.

You can't really blame the watch industry for panicking. Logic dictates that there's no way that people will pay more money for a watch that is less accurate. After all, no one in the music industry has gone back to eight track tapes now that CDs are the standard. Watch brands, industry executives and watchmakers were applying logic to the way people buy watches. But, that's the last thing you want to do — look at watches from a logical perspective. Watches are different from just about any product on the face of the planet. They are one of the few things that you wear on your body, in close contact with your skin. Watches are so... personal. For men, especially, watches are just about the only things they can wear to express their style, their panache, their personality. Watches are cool because they can be subtle and bold, understated and flashy, elegant and casual, all at the same time. Add to this that unless people know about watches, people have no idea what they cost or how interesting

they are. Forget the flashy gold conversation piece, today's hot watch is a complicated mechanical watch by a brand known to the connoisseur, but not widely known by the general public. You could be wearing the latest complicated watch on the beach, wearing only your Speedo, and instantly those in the know, know.

THE MAGIC OF A MECHANICAL WATCH

There is something special about a mechanical watch on your wrist. A quartz watch is just a circuit board with a battery, a gadget that tells time, while a mechanical watch is something that has to be created, crafted and has had life breathed into it by a skilled watchmaker. Mechanical watches cannot be made on an assembly line, they have to, at one point or another, regardless of how much they cost, be attended to by a watchmaker. Once the watch is purchased, it is kept alive by its owner, wearing and winding it every day.



THE TOURBILLON CALIBER OF THE **JAEGER-LECOULTRE** *GYROTOURBILLON*. BY ROTATING ALONG SPHERICAL TRAJECTORIES, THE TOURBILLON ADDS TO THE MOVEMENTS OF THE WRIST.

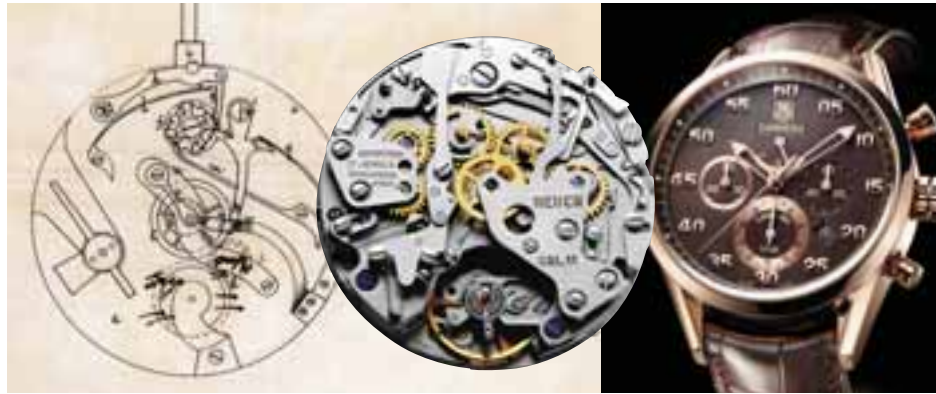
HOW A MECHANICAL WATCH WORKS

LIKE A RUBBER BAND POWERED BALSAWOOD AIRPLANE, A WATCH MOVEMENT IS AT ITS MOST BASIC LEVEL ABOUT TAKING STORED ENERGY AND TRANSLATING THAT INTO TIMEKEEPING. THE WATCH'S ENERGY IS STORED IN THE MAINSPRING AND AS IT UNWINDS, THE OTHER PARTS OF THE WATCH CONTROL THAT POWER AND MAKE IT POSSIBLE TO DISPLAY THE TIME. HERE ARE THE BASICS ON HOW A MOVEMENT WORKS – EVERY TIMEPIECE HAS FIVE REQUIREMENTS:

- ① A POWER SOURCE
- ② A PLACE TO STORE THE POWER
- ③ A WAY OF TRANSMITTING THE POWER
- ④ A WAY OF REGULATING THAT POWER
- ⑤ A WAY OF INDICATING THE TIME.

FOR MECHANICAL WATCHES, THE POWER SOURCE IS THE MAINSPRING. THE MAINSPRING'S POWER IS TRANSMITTED THROUGH A SERIES OF GEARS CALLED THE "GEAR TRAIN." THE BALANCE WHEEL, WHICH IS THE PART OF THE WATCH THAT TURNS BACK AND FORTH AT A CHANGEABLE RATE, IS WHERE THE POWER IS REGULATED. THE INDICATION IS DONE BY THE HANDS: HOURS, MINUTES, SECONDS. ALL THESE THINGS COMBINE TO MAKE THE WATCH WHAT IT IS AND DETERMINE HOW WELL, OR HOW POORLY, IT KEEPS TIME.

EXPLODED VIEW OF THE MOVEMENT IN PHILIPPE'S NEW WINDING ANNUAL CHRONOGRAPH – SIMPLE YET COMPLEX, WITH 6 COMPONENTS ALONG WITH THE FINISHED WATCH



HISTORICAL TECHNOLOGY

There's no getting around it – mechanical watches are a dated, old-style technology. Most of the mechanical watches for sale today are based on designs that are hundreds of years old. Many watches use a hairspring design that was invented by Abraham Louis Breguet in 1795, for example. Today's manufacturing methods are quite different, however. Computers make possible movements and features never contemplated even 20 years ago. Precision and reliability are better than ever because of the new materials and processes.

THE EVOLUTION OF THE TAG HEUER CHRONOGRAPH, CULMINATING IN THE CARRERA C. 360 ROSE GOLD LIMITED EDITION, USING MOVEMENTS, ONE FOR THE TIMEKEEPING ONE SUPERFAST (BEATING 360,000 TIMES PER HOUR) MOVEMENT FOR THE CHRONOGRAPH

ENTRY-LEVEL MECHANICALS

Even though the popularity of mechanical watches is at an all-time high and the market is still growing by leaps and bounds, most people still wear a quartz watch and don't know anything about mechanical watches. To try to make mechanical watches more accessible to the quartz watch customer, more and more companies are developing and offering lower cost (\$300 - \$1,000), entry price point mechanicals. The thinking is that these customers want a watch of higher quality, something with more craftsmanship, and the new crop of entry-level mechanical timepieces fills that bill.

Most of these customers don't want to spend a lot of money on something that they are not really sure about. That's why the under \$1,000 price point is important — it's a way for people to see if they like the watches without spending a huge amount of money. With first time mechanical watch buyers, there are some concerns and worries that have to be overcome. That's where retail sales people come in — they have to be passionate enough about mechanical watches to educate and entice a customer into the world of mechanical timepieces, giving the customer enough information, and making them feel comfortable enough, to make the right decision. Those of you who own mechanical watches know that once people get hooked on them, they'll never leave, and they will most probably graduate into more complicated watches. Also, there is a move towards quality products across the board. People like to buy products from companies with a history and a story. Quality watches have both.



THE ZENITH GRANDE CLASS TRAVELLER REPETITION MINUTES FEATURES A NEW VERSION OF THE FAMOUS EL PRIMERO MOVEMENT, CALIBER 4031. THIS ULTRACOMPLICATED WATCH IS PERFECT FOR TRAVELING, WITH AN ALARM, DUAL TIME, MINUTE REPEATER AND CHRONOGRAPH



PATEK PHILIPPE'S ASTRONOMICAL SKY MOON WRISTWATCH, REF. 5102. THIS INCREDIBLE WATCH SHOWS A PRECISE CHART OF THE SKY IN THE NORTHERN HEMISPHERE, DEPICTING THE PROGRESSION OF THE STARS, THE ORBIT OF THE MOON AND THE MOON-PHASES.

THE MALTE PERPETUAL CALENDAR MINUTE REPEATER FROM **VACHERON CONSTANTIN**. INCLUDES A PERPETUAL CALENDAR, MOON-PHASE AND REPEATING HOURS, QUARTERS AND MINUTES ON DEMAND.



There are a number of companies who make entry-level mechanical watches and the number seems to be growing every month as watch companies introduce mechanical watches at lower price points. Companies like Hamilton, Swiss Army, Maurice Lacroix, Chase-Durer, Tutima, Fortis, Longines, Oris and others are offering entry-level mechanicals that provide quality, while still offering higher price mechanicals in the rest of their line.

It's important to remember that even though you can buy a high quality mechanical watch for under \$1,000, that doesn't mean that the watch that sells for \$750 is the same quality as the watch that sells for \$5,000 or more. An entry-level price point mechanical watch is like buying an entry-level car — the options, the special treatments, the fine points people readily pay extra for, just aren't there. There is a level of sophistication present in higher-priced watches, the movement is more refined, the finish finer, the materials used are different and higher grade, there are complications present, the attention to detail is greater, and much more. These entry-price-point mechanical watches are meant to give a person entrée into the mechanical lifestyle, and from there they can go in whatever direction they want. These low-priced mechanicals are about opening the door, giving people a glimpse inside the wonderful world of mechanical watches. Watches should be a more important part of everyone's wardrobe. A CEO or president shouldn't be wearing a \$50 watch and one way to do that is to instill in everyone an appreciation of mechanical watches. These entry-level mechanicals are the first step in that direction.



BASED ON A MODEL FROM 1928, THE NEW **PRINCE** IS A COSC-CERTIFIED CHRONOMETER FEATURING A BEAUTIFUL RECTANGULAR MOVEMENT, VISIBLE THROUGH THE EXHIBITION

CHOPARD'S NEW **L.U.C. TECH REGULATO** PLAYS THE HOURS, MINUTES AND SECONDS ON SEPARATE AXES FOR EASIER READING. CHOPARD HAS ADDED A SECOND TIMEZONE AT THE 12 O'CLOCK POSITION, ADJUSTED INDEPENDENTLY BY PUSHERS, TO MAKE THE WATCH EVEN MORE USEFUL. THE L.U.C. MOVEMENT, MANUFACTURED BY CHOPARD, HAS AN EIGHT DAY POWER RESERVE.

PICKING A QUALITY WATCH BRAND

- CHOOSE A WATCH BRAND WITH A TRUE HISTORY.
- CHECK OUT THE HISTORY OF THE BRAND. VISIT SOME INDEPENDENT WEBSITES AND SEE WHAT THEY SAY ABOUT THE BRAND. IT'S EASY TO CLAIM A WATCH MAKING TRADITION, MUCH HARDER TO PROVE IT.
- MAKE SURE THERE IS TRUE WATCHMAKING IN THE BRAND.
- YOU HAVE TO LIKE THE DESIGNS AND THE FEEL OF THE WATCH. DON'T BUY SOMETHING BECAUSE YOUR FRIENDS TOLD YOU TO.
- A QUALITY WATCH SHOULD HAVE AT LEAST A TWO YEAR WARRANTY.
- BEWARE OF WATCH PRICES THAT ARE TOO GOOD TO BE TRUE. THEY USUALLY ARE.

COMPLICATED WATCHES

Once you are brought into the fold of mechanical watches, complications are the next step. A complication is defined as anything above and beyond the simple telling of the time, mainly because everything, including a small second or a day/date display, is something that has to be added to or integrated into a basic mechanical movement.

Some of the more popular complications on the market today are: chronographs, moon-phases, dual timezones, minute repeaters, annual calendars, perpetual calendars and tourbillons. Some of these mechanical watches have more parts than a car, with some smaller than a human hair.

The Vacheron Constantin's Tour de l'Île has 834 parts and took more than ten years to create.



TO CELEBRATE THE 30TH ANNIVERSARY OF FOUNDER MICHEL PARMIGIANI'S ENTRY INTO WATCHMAKING, **PARMIGIANI FLEURIER** INTRODUCED THE **KALPA XL HEBDOMADAIRE SQUELETTE**.

THE CARE AND FEEDING OF A MECHANICAL WATCH

THE BEST THING YOU CAN DO TO MAKE SURE YOUR MECHANICAL WATCH STAYS IN GOOD SHAPE IS TO WEAR IT. MECHANICAL WATCHES ARE DESIGNED TO OPERATE CONTINUOUSLY, SO DON'T LET YOUR WATCH SIT AROUND AND WIND DOWN. WEAR IT AND KEEP IT WOUND ALL THE TIME. IF YOU HAVE MORE THAN ONE MECHANICAL WATCH, A WATCH WINDER (A POWERED BOX THAT TURNS THE WATCH FOR YOU, KEEPING IT WOUND) MIGHT BE A GOOD IDEA. IF THE WATCH IS OPERATING, THE FINE OILS DON'T HAVE A CHANCE TO DRY UP AND THE WATCH WILL FUNCTION WELL FOR A LONG TIME.

LIKE ANY OTHER MECHANICAL OBJECT, INCLUDING YOUR CAR, YOUR WATCH MAY NEED SERVICING FROM TIME TO TIME. SOME WATCH MANUFACTURERS RECOMMEND SERVICE AT ROUGHLY FIVE YEAR INTERVALS, WHILE OTHERS MANUFACTURERS DON'T ADVISE OWNERS TO GET SERVICE UNTIL THE WATCH IS NOT PERFORMING CORRECTLY (LOSING TIME, RUNNING FAST, ETC.). LISTEN TO WHAT THE MANUFACTURE ADVISES AND DO IT.

SOME PARTS OF YOUR WATCH – LIKE WATER RESISTANT GASKETS, CHRONOGRAPH PUSHERS, WATCH BANDS AND MORE – MAY WEAR OUT QUICKER, DEPENDING ON HOW YOU USE YOUR WATCH. THE GASKETS MAY DRY OUT AND LOSE THEIR WATER RESISTANCY IN AS LITTLE AS TWO YEARS, SO KEEP TRACK OF HOW LONG YOU HAVE HAD YOUR WATCH AND GET IT CHECKED BY YOUR AUTHORIZED RETAILER EVERY SO OFTEN. IF YOU TAKE CARE OF YOUR MECHANICAL WATCH, IT CAN THEORETICALLY RUN FOREVER. AS THE CLASSIC ADS FROM PATEK PHILIPPE STATE, "YOU NEVER ACTUALLY OWN A PATEK PHILIPPE, YOU MERELY TAKE CARE OF IT FOR THE NEXT GENERATION."

IWC'S *BIG PILOT*, 46.2MM, USES THE WORLD'S LARGEST AUTOMATIC MOVEMENT AND HAS AN 8.5 DAY POWER RESERVE. THE WATCH FEATURES A SOFT IRON INNER CASE FOR SCREENING AGAINST MAGNETIC FIELDS.



THE *LAUREATO EVO³ LARGE DATE* FROM **GIRARD-PERREGAUX** INCLUDES A BIG DATE, MOON-PHASE AND POWER RESERVE INDICATORS.



THE *PLATINUM MALTE PERPETUAL CALENDAR RETROGRADE DATE "OPENFACE" GRANDE COMPLICATION* FROM **VACHERON CONSTANTIN** SHOWCASES THE INCREDIBLY COMPLICATED, HAND FINISHED MOVEMENT (CALIBER 1226) INSIDE.



THE *EBEL 1911 PERPETUAL CALENDAR* DISPLAYS DATE, MONTHS (WITH INDICATION OF LEAP YEARS) AND DAYS OF THE WEEK, ALONG WITH AN AMAZINGLY ACCURATE ASTRONOMICAL MOON-PHASE.



THE *MASTER WORLD GEOGRAPHIC* FROM **JAEGER-LECOULTRE** DISPLAYS THE LOCAL TIME AND ALL 24 DIFFERENT TIMEZONES, WELL AS THE PRECISE TIME IN ONE OTHER SELECTED TIMEZONE – ON A SINGLE WATCHFACE AT THE SAME TIME.

THE ELEGANTLY SIMPLE *ROTONDE DE CARTIER* IN THE COLLECTION PRIVÉE FROM **CARTIER** FEATURES A SILVER GUILLOCHÉ DIAL WITH A LARGE DATE AND SMALL SECONDS.



HOW TO GET STARTED

It's easy to get started in mechanical watches. The first step is to read as much about watches as you can, and this special section is a great place to start. Use the web for research, but be leery about buying any watches on the Internet. It's impossible to know where a watch came from when it's sold on the Internet – it could easily be secondhand, stolen or illegally imported into the US. If you buy a watch like this, you will not be able to have it serviced by an authorized retailer, and the warranty will be null and void.

Once you've identified a couple of different brands and watches you are interested in, go visit an authorized retailer. Pictures of watches, though beautiful, don't really do the timepieces justice. It's important to put them on your wrist and see how you feel about the watches.

If you don't fall in love with the watch, don't buy it. You'll quickly have buyer's remorse. With the variety and sheer volume of mechanical watches on the market today, you can rest assured that you will find a watch to fall in love with, so keep looking. You don't have to spend a fortune to get started wearing a mechanical watch – set aside anywhere from \$300 to \$1,000 and you can get a quality, good looking mechanical and you'll be on your way.



HUBLOT'S BIGGER BANG TOURBILLON CHRONO

HUBLOT WAS BORN IN 1980 WITH A UNIQUE CONCEPT – COMBINING AN ATTRACTIVE YET SIMPLE GOLD WATCH (DESIGNED AFTER A PORTHOLE, WHICH IS WHAT “HUBLOT” MEANS IN FRENCH) WITH A RUBBER STRAP, RESULTING IN A FUSION NEVER SEEN BEFORE. TODAY, HUBLOT HAS TAKEN THE IDEA OF FUSION FARTHER THAN EVER, REINVENTING ITSELF WITH DESIGNS AND COMBINATIONS OF MATERIALS THAT ARE UNHEARD OF AND EXTREMELY EXCITING. THE FIRST STEP WAS THE BIG BANG, THE WATCH THAT WON THE “BEST DESIGN 2005” PRIZE FROM THE PEOPLE WHO KNOW, THE GENEVA WATCHMAKING GRAND PRIX. TAKING THE CONCEPT EVEN A STEP FURTHER IS THE BIGGER BANG TOURBILLON COLUMN-WHEEL CHRONOGRAPH. THIS IS THE FIRST WATCH TO COMBINE A TOURBILLON WITH A COLUMN-WHEEL CHRONOGRAPH, DIRECTLY VISIBLE THROUGH THE DIAL AT 12 O’CLOCK. THROUGH THE SKELETONIZED DIAL, YOU CAN WATCH THE OPERATION OF THE COLUMN-WHEEL MECHANISM, WHICH IS A VERY CLASSIC AND TRADITIONAL CHRONOGRAPH. THE BIGGER BANG IS A FLYING TOURBILLON MADE UP OF 262 COMPONENTS, UTILIZING A GYROMAX BALANCE. THIS NEW TOURBILLON HAS A FIVE-DAY POWER RESERVE AND FEATURES A BOTTOM PLATE DECORATED IN BLACK GOLD AND A BLACK SKELETON DIAL DECORATED WITH A SUNRAY MOTIF. THE BIGGER BANG TOURBILLON COLUMN-WHEEL CHRONOGRAPH IS AVAILABLE IN A PLATINUM 950 CASE WITH A BLACK CERAMIC BEZEL, IN AN 18K RED GOLD CASE WITH A BLACK CERAMIC BEZEL AND IN A BLACK CERAMIC CASE WITH A BLACK CERAMIC BEZEL.

THE HUBLOT BIGGER BANG, AND NEW VERSIONS OF THE BIG BANG, INCLUDING THE ALL BLACK VERSION AND THE MAG BANG, INTRODUCED THIS YEAR, ARE MAKING A BIG NOISE AND A BIG STATEMENT. EXACTLY WHAT HUBLOT, AND THE WATCH INDUSTRY, NEEDS.



THE FUTURE OF MECHANICAL WATCHES

The future of mechanical watches looks brighter than ever, even brighter than before the quartz revolution hit. More and more companies are making mechanical watches, and as more customers get hooked on mechanicals, the demand will continue to grow. The best watch manufacturers are committed to continuing to strive for perfection. Within the framework of the mechanical movement, they are working on new ways of doing things, new movement designs that produce greater accuracy, longer reliability and less need for adjustment. In addition, many more companies are making the commitment of designing and manufacturing their own movements. In the past, it was enough for companies to buy movements from movement manufacturers, and many still do, but discerning customers are asking where the movements come from and those that want truly unique watches no longer want off-the-shelf movements. They want to buy movements that are special and are only used in the watches from one brand.

Mechanical watches are here to stay. They are magic on the wrist, living machines that are amazing in their complexity and their number of moving parts. Take for example the Zenith El Primero movement, one of the most famous in the industry. This movement beats 36,000 times an hour, which is 864,000 times a day, 25,920,000 times a month, 311,040,000 times a year. The watch is truly a marvel of miniature engineering and a phenomenal accomplishment of the human race. Available now to be placed on your wrist. What are you waiting for? ✓

DAVID YURMAN'S THOROUGHbred GMT INDICATES THE SECOND TIME ZONE WITH A VERY VISIBLE RED ARROW HAND.. THE PRECISE MOVEMENT IS COSC-CERTIFIED.

THE TAMBOUR AUTOMATIC GMT ALARM FROM LOUIS VUITTON HAS A SECOND TIME ZONE AND A MECHANICAL ALARM. THE SAPPHIRE CASEBACK LETS YOU WATCH THE ALARM MECHANISM IN ACTION.



THE MAURICE LACROIX MASTERPIECE CINQ&CINO FEATURES FIVE HANDS (HOUR, MINUTE, DAY, DATE AND SECONDS) AND FIVE DAYS OF POWER RESERVE. ALL THE FUNCTIONS ARE CONTROLLED THROUGH THE CROWN FOR FAST ADJUSTMENT.

THE FRANCK MULLER MASTER BANKER LUNAR CONTINUES THE BRAND'S TRADITION OF INNOVATION WITH THREE TIMEZONES AND A MOONPHASE DISPLAY.