SHOCK RESIST

world.g-shock.com

CASIO COMPUTER CO., LTD. Tokyo, Japan

CASIO

THE ORIGIN.

5600

ABSOLUTE TOUGHNESS

5600. A number with special meaning for G-SHOCK. It is used only in the names of models that have inherited the DNA of the very first G-SHOCK among all the thousands that have succeeded it. The square design that is said to symbolize the origin of all G-SHOCK provides evidence of the tireless efforts and continuous innovation born from a developer's belief that he could create a watch that would not break, even if dropped, and represents the final form every G-SHOCK aims to achieve. Today, after 35 years of evolution, this tough spirit remains as resilient as ever. It is still the source of G-SHOCK's indomitable strength.

STORY

BEHIND THE BIRTH OF G-SHOCK

THE YEAR 1983 SAW THE BIRTH OF G-SHOCK.
IT ALL BEGAN WITH THE FIRST LEGENDARY MODEL DW-5000C.

G-SHOCK was born from a single belief that
there could be a watch that would not break.
Formed to handle its development, Project Team Tough
constructed over 200 prototypes for performance testing,
and spent over two years developing the structure and improving the parts.
An unimaginable process of trial and error was repeated continuously
until 1983, when the shock-resistant structure that is still
G-SHOCK's core technology was finally completed.

A THOUGHT EXPRESSED IN ONE LINE

"UNBREAKABLE" WATCH

"I want to make a timepiece that will not break, even if dropped." This proposal, submitted at an internal meeting over 35 years ago, suggested that the development should be a one-man job handled by Kikuo Ibe, the engineer responsible for the external design of watches at the time. It was considered a clear, simple idea that had come up when a watch happened to drop and break during working hours. Watches are delicate precision instruments, and, at that time, it seemed only natural that they should break when falling to the floor. The concept of a tough watch seemed not only unconventional, but even nonsensical. Nevertheless, the proposal was accepted. A project team comprising just three people was formed — and development of the new watch began.

A TUNNEL WITH NO EXIT

HARD DAYS

The team's initial approaches to overturning common sense began from zero. They first assumed it would be best to cover the entire watch with a soft material. A few dropping experiments put that idea to rest without delay. They found that a watch would break no matter how much shock-absorbent rubber was adhering to the case exterior. And the more cushioning material they attached, the more the size increased. The experimental model soon swelled to the size of a large softball.

A 5-step shock-absorbent structure that protected the module, or heart of the watch, with five cushioning materials was eventually devised, solving the size problem. But a new problem concerning the strength of the electronic parts soon arose. When the team members tried to reinforce the parts, they became caught up in a vicious cycle in which strengthening one broken part led to breakage of another.

This unanticipated process of trial and error continued day after day: The developers would drop a prototype with reinforced parts from the window of the 3rd-floor men's room and watch it break on the ground 10 meters below. They would then analyze the broken parts, strengthen them and try again. The cycle seemed endless.

A "MIRACLE MOMENT" ARRIVES

BREAKING THROUGH

With development apparently going nowhere, Ibe made a decision in despair. In one final effort, he would set a time limit of one week on his own initiative and spend all his waking hours on research. If that were not enough, he would consider resigning from his job.

After another week without success, the fateful day arrived. Ibe stepped outside the laboratory building to catch a breath of fresh air in a park next door, where he saw a child bouncing a rubber ball.

Suddenly, an inspiration struck him: "If you attached a watch to that ball, it could endure severe shocks." The idea that sprang to mind in this miracle moment expanded to complete a unique structure in which the module at the heart of the watch floats in the air within a hollow structure inside the case.

THE ULTIMATE FORM AS ORIGIN

"BIRTH OF G-SHOCK"

It was not long before the first G-SHOCK, the model DW-5000C, was launched in 1983. The square design with its symbolic importance was created in pursuit of shock resistance alone, with nothing wasted. The ultimate form for achieving this single function, it has been handed down to the present as an eternal standard. Belief engenders fruit. G-SHOCK's origin is the story of an unwavering belief that inspired a relentless quest and produced a tough spirit that promises never to fade away.

CHALLENGE

FOR ABSOLUTE TOUGHNESS

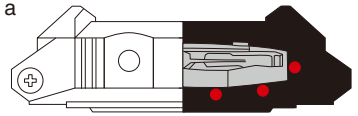
STRUCTURE, FUNCTIONS, DESIGN, QUALITY. COMMITTED TO EACH ASPECT OF TOUGHNESS
WITHOUT COMPROMISE, G-SHOCK CONTINUES ITS TIRELESS CHALLENGE OF ABSOLUTE TOUGHNESS.

1 | STRUCTURE
2 | FUNCTIONS
3 | DESIGN
4 | QUALITY

1 | STRUCTURE Unwavering toughness, In variable structure, Inevitable design.

HOLLOW CASE STRUCTURE

The module is floated in the air inside a case with a hollow structure.
External shocks are mitigated.
The materials are selected for their flexible shock-absorbent characteristics.
Urethane resin is used as a durable exterior material.



DW-5000C

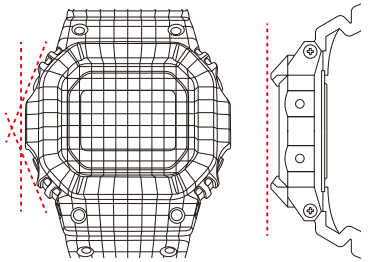
UNCHANGEABLE SQUARE DESIGN

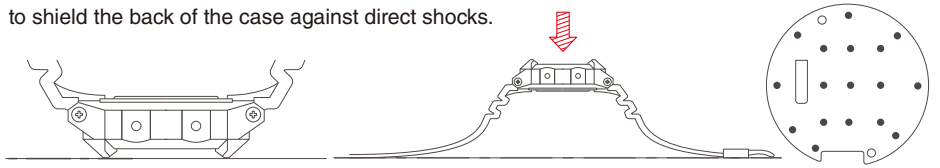
A rectangular form was devised as the optimal shape for shock-resistant construction.
This form, which eliminated all waste and became the original G-SHOCK form, still boasts a perfection that is recognized as the final form.

DW-5600E

ALL-DIRECTIONAL COVERING

Knobby protrusions from the case and bezel protect the buttons and crystal from direct shocks.
The band connection section is stiffly curved, moreover, to shield the back of the case against direct shocks.





STRUCTURAL REINFORCEMENT

Since the launch of the DW-5600E in 1996, the inner case has been constructed of resin.
Exchanging the case back for the back of a panel enabled further weight reduction.
Structural changes introduced to increase shock resistance included efforts to reinforce the module further against impacts.

2 | FUNCTIONS

Assuring practical usability under any circumstances

1996

Stronger in the Dark

LIGHT FUNCTIONS

Development of an EL backlight improves the practicality of the dial light function compared to the conventional miniature bulb. As time passes, the backlight will evolve into an auto light that turns on automatically with just a tilt of the wrist, and eventually into a high-visibility LED light.

*Photo shows model DW-5600E-1.

2002

Converting Light to Power

SOLAR-POWERED

CASIO's proprietary solar-charging system that converts light into ample electric power to provide stable operation of multiple functions is launched. It is installed in many models to eliminate the bother of periodic battery replacements.

*Photo shows model G-5600-1.

2005

Keeping Accurate Time

RADIO-CONTROLLED

A watch equipped with a reception function that receives standard time radio waves and corrects the time automatically and provides greatly improved accuracy over a quartz watch display appears. Multiband 6 models can receive radio waves from 6 broadcasting stations around the world.

*Photo shows model GW-5600J-1.

2008

Pursuit of Multifunctionality

SPORTS FUNCTIONS

Watches loaded with functions for use in wide-ranging sports appear, including stopwatches for soccer and Tide Graph/Moon Data displays for fishing. The spheres of tough watch activity continue to expand.

*Photo shows model GLX-5600-7.

2008

Undefeated by Cold

LOW-TEMPERATURE RESISTANCE

Watches that continue to pursue the tough performance of the original G-SHOCK while supporting operation in low-temperature environments as cold as -20°C are introduced. They support activities in extreme cold environments, from snowy mountains to icebound polar regions.

*Photo shows model GLS-5600X-6.

2012

Improved Usability

BLUETOOTH®

Bluetooth® communication is adopted to provide automatic time correction from a smartphone. Various other operations, such as alarm and timer setting, can also be managed with the smartphone app, moreover, realizing easy operation without touching the watch. Daily life usability is more convenient than ever.

*Photo shows model GB-5600AA-1.

3 | DESIGN

New-style tough watch creation

EVOLUTION OF **COLOR**

The introduction of color resin in 1992 was followed
by the development of various colorings,
such as mixed color molding and skeleton (transparent) resin,
drawing on the properties of resin.
Case and band decoration making full use of advanced coating
and printing technologies was also realized, moreover,
greatly expanding the range of design possibilities.

EVOLUTION OF **GRAPHICS**

Design innovations included inverting
the LCD to make the backlight
inconspicuous during nighttime activities,
and expanding the expressive possibilities
of digital watches through such gimmicks as logos
and graphics that emerge
when the EL backlight is illuminated.

4 | QUALITY

Striving for greater heights in a commitment to product manufacturing

EVOLUTION OF **MATERIALS**

While urethane resin remains a mainstream band material, various other materials have been developed in pursuit of greater strength.
Besides meeting the demands of hard use, these developments have led to improved wearability
and provided new directions for product design.

01


02

03


04

Resin band
[DW-5000C-1A]
01
1983

Cloth band
[DW-056USV-1]
02
1999

Carbon-fiber insert band
[GW-S5600-1]
03
2010

CORDURA® fabric band
[DW-5600BBN-1]
04
2016

EVOLUTION OF **VALUE**

By devoting unstinting attention to materials and finishing, G-SHOCK seeks to express the eternal value of strength.
The concept model is just one of many to realize an incomparable level of quality.

05


06

07

08


09

Metal band
[DW-5000D-8]
05
2001

Metal core band
[GW-5600BCJ-1]
06
2005

DLC coating screwback
[GW-5000-1]
07
2009

Artificial opal dial
[GLS-5600KL-6]
08
2010

18K gold case & band
[BASELWORLD REFERENCE EXHIBITION MODEL]
09
2015

CHRONICLE OF ORIGIN SERIES SINCE 1983

In the 35 years since the launch of the first model, G-SHOCK has continued to evolve in search of yet greater heights, while always maintaining its inherited square design.

TO 1990S

DW-5000C-1A
1ST COMMEMORATIVE MODEL
1983

DW-5600C-1
1ST 5600 SERIES MODEL
1987

DW-5600E-1
1ST EL BACKLIGHT INSTALLED
1996

DW-056USV-5T
CLOTH BAND ADOPTED
1999

WW-5100C-1
-30°C LOW-TEMPERATURE RESISTANCE SPECS
1983

DW-500C-1
BABY-G PIONEER MODEL
1988

DW-5600C-9B
1ST YELLOW COLOR MODEL
1992

DW-5600ED-4
BUMPER PROTECTOR INSTALLED
1996

TO 2000S

DW-5000D-8
METAL BAND ADOPTED
2001

G-5600-1
1ST TOUGH SOLAR MODEL
2002

GW-5600J-1
1ST RADIO-CONTROLLED, SOLAR-POWERED MODEL
2005

GW-5000-1
MULTIBAND 6 MODEL
2009

DW-5600CF-3
CAMOUFLAGE COLOR MODEL
2002

G-5600L-1
WIDE LEATHER BAND ADOPTED
2004

DW-5600SF-2
COLLABOLATION WITH 6 SURFING BRANDS MODEL
2006

DW-5600EH-7
ERIC HAZE COLLABORATION MODEL
2008

TO 2010S

GW-S5600-1
CARBON FIBER-INSERT BAND ADOPTED
2010

DW-5600PR-4
ARTIST (PALA) COLLABORATION MODEL
2011

GB-5600AA-1
SMARTPHONE LINK INSTALLED
2012

DW-D5600BW-7
TIGER CAMOUFLAGE MODEL
2015

GLS-5600KL-6
ARTIFICIAL OPAL DIAL INSTALLED
2010

DW-5600LP-1
ARTIST (FILIP PAGOWSKI) DESIGN MODEL
2012

GW-M5610SD-8
DESERT BEIGE MODEL
2013

DW-5600PM-1
MARBLE POLARIZED COATING ADOPTED
2015

DW-5600E
FEATURES

200 m water resistance
Built for hard use, in the rain or around water.

Flash alert
Flashes in synch with alarm/time signal/timer.

Button guard
Shaped to protect the buttons against direct shocks.

Bezel form
Form with protrusions to protect the glass.

Band shape
Irregular shape acting as spring to guard the case back.

Shock resist mark
A function icon inherited from the first model signifying the durability to withstand free-falling shocks.

FUNCTIONS
· 1/100-sec. stopwatch
· Timer/Multi-alarm
· Full auto calendar
· EL backlight