

CELVIANO
Grand Hybrid

Go Beyond Sound

CASIO COMPUTER CO., LTD. Tokyo, Japan

<https://world.casio.com/>

CASIO®

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• Displays shown in this catalog are photographic images.

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Digital Acoustic Hybrid Technologies

Since the development of the first digital piano, instrument makers have strived to create an instrument that could provide the experience of playing an acoustic grand piano. For years, Casio has refined its technologies with this goal in mind.

Casio derives a significant advantage in reaching this goal since it does not manufacture acoustic pianos. This position has allowed Casio to research the finest acoustic pianos from around the world and develop groundbreaking music technology that recreates the piano experience. The result is a revolutionary line of digital pianos.

These digital pianos incorporate tones developed from three world-famous grand pianos, a keyboard system employing the same materials and dynamic mechanisms as grand pianos, and a sound system that delivers the rich, natural tone quality and sound field of an acoustic grand piano. Casio's CELVIANO Grand Hybrid represents this convergence of acoustic and digital technologies.

With the new GP-510BP and GP-310BKWE, Casio has succeeded in expanding the range of musical expression even further. This is the crystallization of 40 years of instrument making at Casio.

Developed in collaboration with


C. BECHSTEIN

CELVIANO
Grand Hybrid



GP-510BP



GP-310BK



GP-310WE

Sound



Three Legendary Pianos

Their individual character and tone faithfully recreated

CELVIANO Grand Hybrid reproduces even the subtle nuances of the world's most respected pianos. Three pianos that originate in Berlin, Hamburg and Vienna were chosen for this project. Casio has painstakingly researched and analyzed the unique characteristics of each piano. CELVIANO Grand Hybrid delivers brilliant sound of these pianos reproduced with Casio's advanced technology. It will provide the experience of owning three of the finest pianos on earth.



Berlin

[Berlin Grand]

A balanced, elegant sound. Ideal for playing impressionistic music. Notable for its clear, ringing tone across the entire range.



Hamburg

[Hamburg Grand]

A brilliant, rich sound. Loved by pianists for its wide range of expression. Well suited for various playing styles and genres.



Vienna

[Vienna Grand]

Noted for its impressive low range. Great for both soft and vigorous playing with its warm tone. An ideal instrument for music from the classical period.

Sound



Sound Development in Collaboration

The Berlin Grand sound was developed in collaboration with C. Bechstein.

Casio sought a clear, balanced and elegant sound for CELVIANO Grand Hybrid.

The D282, C. Bechstein's ultimate masterpiece, is the model

Casio intensively studied to achieve the goal.

Mr. Albrecht, CTO and Master Piano Maker at C. Bechstein, visited Casio R&D to supervise the sound development process through the final modification.



About C. Bechstein

Since Carl Bechstein founded the Pianoforte production facility in Berlin in 1853, the name C. Bechstein has stood for the highest class of upright and grand pianos. C. Bechstein pianos have been appreciated by many famous composers and artists for their finest quality of sound and touch for many years. In the 21st century, C. Bechstein is still recognized as one of the world's leading piano manufacturers.



“Superior sound and a professional touch.
We believe we have crafted a sensational digital piano we can be very proud of.”

“Casio is a very successful company in the field of electronic musical instruments. C. Bechstein is Europe's most important maker of high-end acoustic grand and upright pianos, with more than 160 years' history and expertise in traditional craftsmanship. With their rich and noble tone, providing a wide range of tone colours and their professional and elegant touch, C. Bechstein pianos have continued to inspire and delight music lovers and famous artists around the world. We are confident that these two companies, by collaborating in a partnership that draws on their mutual experience, can create new digital pianos unlike anything we have seen before. For this project, we developed the tone colours for the CELVIANO Grand Hybrid “Berlin Grand” based on sampling of a C. Bechstein concert grand piano. At the same time, we focused our efforts on also achieving an excellent key action. Through this collaboration between Casio and C. Bechstein, we believe we can take pride in having created a very competitive digital piano with excellent sound and a professional touch.”



*Werner Albrecht,
CTO and Master Piano Maker
(Klavierbaumeister)
at C. Bechstein*

“Getting ever closer to perfection in collaboration with C. Bechstein. There was no compromise in our development process to evolve the distinctive character of the CELVIANO Grand Hybrid.”

“The collaboration with C. Bechstein gave Casio an opportunity to discover the true beauty of traditional grand pianos. With greater understanding of their fundamental elements, we modified our approach to develop new instruments that are evolutionary steps forward from other digital pianos. In this challenging work, we experienced immensely exciting moments with many discussions. As the sound was expected to be perfect, we focused not only on the tone of each individual note but also reverberation in actual musical performances. After developing higher quality keys, we worked to create a mechanism that responds to the subtle nuances of a player's touch. The superior feel of CELVIANO Grand Hybrid is the result of our work with a persistent attitude without compromise.

We are proud of the high praise that CELVIANO Grand Hybrid has earned from so many people, but we weren't yet satisfied with what we'd achieved and have further refined these qualities in the development of GP-510BP and GP-310BKWE. We hope everyone can try CELVIANO Grand Hybrid and enjoy the experience.”



*Naoaki Ito,
Sound Designer at Casio*

Touch



Your performance demands authenticity

It begins at the first touch

The player's movement is transformed into music with many important factors. The most tangible factor is the keys.

CELVIANO Grand Hybrid delivers authenticity from the first touch.

The revolutionary Natural Grand Hammer Action keyboard is made with high-quality wooden keys. Its mechanism incorporates a hammer action that follows the same path of motion as in a grand piano. When the lid is lifted, you can see the hammers in motion through a clear panel as you play. Going beyond a standard acoustic mechanism, this action allows faster note repetition than acoustic pianos, while maintaining a true piano touch.



GP-510BP

- Polished Black
- Natural Grand Hammer Action Keyboard
- Grand Acoustic System
- Grand Pedal System
- Adjustable lid position



GP-310BK / WE

- Satin Black (GP-310BK)
- Natural White Wood (GP-310WE)
- Natural Grand Hammer Action Keyboard
- Grand Acoustic System
- Grand Pedal System
- Adjustable lid position



Sound

AiR Grand Sound Source

AiR Grand

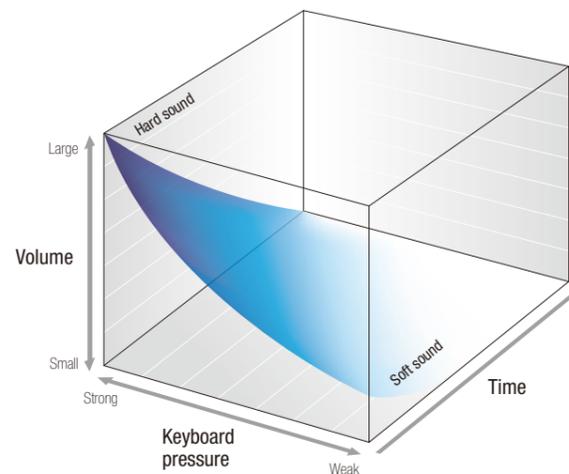
More natural sustain for more beautiful chord resonance.

More sensitive expressiveness for pianissimo sounds, especially when playing extremely softly.

The new GP-510BP and GP-310BKWE incorporate the evolved AiR Grand Sound Source, a system using Casio's state-of-the-art sound technologies. It includes many impressive features. Multi-dimensional Morphing delivers smooth changes between soft and strong playing. Acoustic Simulator produces sound characteristics like that of a grand piano. The authenticity generated by the AiR Grand Sound Source ensures a pure piano experience.

Multi-dimensional Morphing

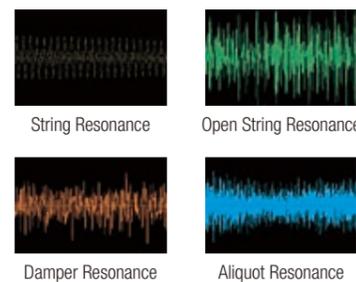
On an acoustic grand piano, the volume and quality of sounds change from the time the keys are struck until they die away. Casio's Multi-dimensional Morphing technology enables natural, smooth transitions in sound volume and tone based on the power of the keystroke. This technology contributes to more expressive performances.



Acoustic Simulator

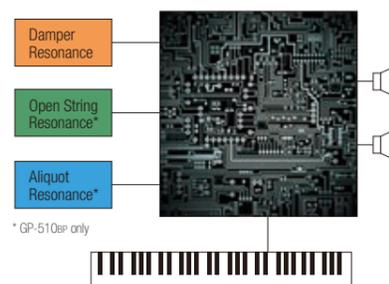
[Resonance System]

The various types of resonance in a grand piano are crucial to the playing experience. The CELVIANO Grand Hybrid incorporates String Resonance, which exposes the harmonic relationships between various strings when keys are struck. Also Damper Resonance reproduces the resonance occurring when a damper pedal is pressed. The GP-510BP is equipped with Open String Resonance and Aliquot Resonance functions for enhanced realism. Casio's Resonance System reproduces the resonance of both the strings and sound board of a grand piano by selecting, controlling and synthesizing according to performance conditions.



[Hardware Resonator]

The unique Hardware Resonator synthesizes Damper, Open String and Aliquot Resonances to reproduce distinctive, individual sounds for all the respective 88 keys.



[Action Sound System]

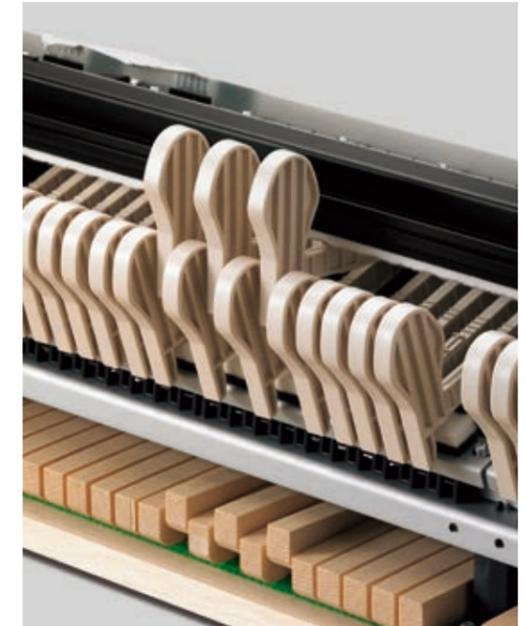
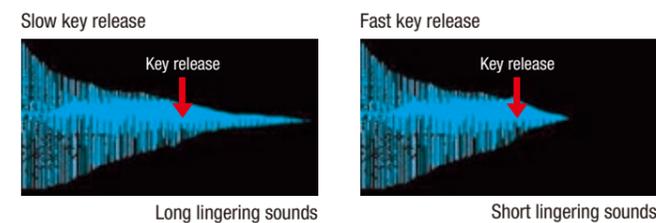
A grand piano also generates several types of mechanical sounds, which are an important part of the playing experience. Casio has sought to provide a more realistic simulation by reproducing the sounds of these mechanisms. Four types of operating sounds are included, and the volume of each can be set independently or turned off.



* Damper Noise, Key On Action Noise and Key Off Action Noise are incorporated in GP-510BP and GP-310BKWE. Pedal Action Noise is incorporated in GP-510BP only.

[Key Off Simulator]

The lengths of the lingering sounds produced by a grand piano vary depending on the speed at which players release their fingers after pressing the keys. In a similar fashion, Casio's Key Off Simulator controls the length of these sounds based on the key's release speed and delivers a natural decay of the sound. This enables players to express delicate nuances when playing staccato and legato.



[Hammer Response]

The timing of a grand piano's sound varies subtly depending on which keys are being played, even when the keys are struck with the same force. To achieve optimal authenticity, Casio has installed appropriate settings for each of the three grand piano tones. The sound production timing can also be adjusted to suit the player.

Grand Pedal System

By continuously sensing and detecting the position of the damper pedal, Casio's Grand Pedal System enables fine-tuning of the damping volume and note length depending on the degree of pedal depression. In addition, the Half Pedal Position function permits adjustment of the depression position at which the damping effect comes into play according to the player's preference. For performances which utilize the soft pedal, the change in volume and characteristics of sound is extremely natural where the player can enjoy a wide range of expression when playing softly. The Action Sound System's Damper Noise and Pedal Action Noise features reproduce even subtle operating sounds like those experienced with an acoustic grand piano.

* Pedal Action Noise : GP-510BP only



Sound

Grand Acoustic System

More powerful, dynamic playing expression from lows to mids to highs, thanks to the superlative sound delivered by an upgraded downward-facing main speaker, with especially improved bass

Casio has developed a new dedicated speaker system for the CELVIANO Grand Hybrid that reproduces the characteristics of sound emanating upwards and downwards from an acoustic grand piano. This enables powerful and dynamic expression from rich, stately bass to bright mid-to-high sounds. The four-channel audio system incorporates six speakers, carefully positioned in a structural design that releases sound outward from the interior of the body. The system delivers the same sound field experience a player would enjoy while playing an acoustic grand piano.



Adjustable Lid Position

The CELVIANO Grand Hybrid's design includes a top panel that can be manually raised and lowered. The lid's position not only physically affects the sound coming from the upper speakers, but also works in conjunction with the "Lid Position" setting to accurately duplicate the characteristics of the adjustable lid on an acoustic grand piano.



Lid Simulator

The volume and timbre of sound produced by a grand piano change depending on the degree to which the lid is open or closed. The Lid Simulator simulates these acoustic effects digitally. Pianists can select among four settings for opening and closing stages and enjoy playing music with the piano sound effect of their choice.



* The Lid Simulator's setting value remains unchanged, regardless of whether the piano's top board is open or closed.

Hall Simulator & Listening Position

Twelve types of Hall Simulator are included, each one based on careful analysis of the acoustic characteristics of a world-famous concert venue. Each space has a total of four Listening Position settings. For example, the pianist can simulate the experience of hearing the piano from a seat in the audience, as opposed to the playing position.

Hall Simulator list

① ROOM	⑦ OPERA HALL
② SALON	⑧ VIENNESE HALL
③ N.Y. CLUB	⑨ L.A. HALL
④ SCORING STAGE	⑩ BERLIN HALL
⑤ DUTCH CHURCH	⑪ FRENCH CATHEDRAL
⑥ STANDARD HALL	⑫ BRITISH STADIUM



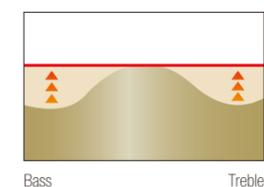
● Listener's position ● Player's position



Volume Sync EQ

Volume Sync EQ is especially useful for quiet playing at home and other times when you want to keep the speaker volume low. This function balances the sound at low volumes by adjusting the sound quality in the low and high registers. The result is a constantly pleasant playing experience, no matter where the volume is set.

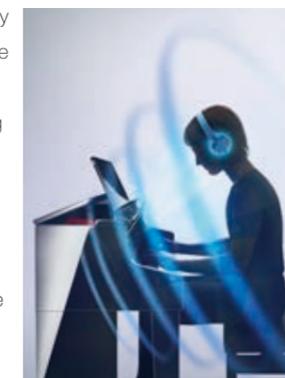
When playing at low volume



When the piano is played at low volume, natural sound is maintained through compensation of the tone in the low and high ranges.

Headphone Mode

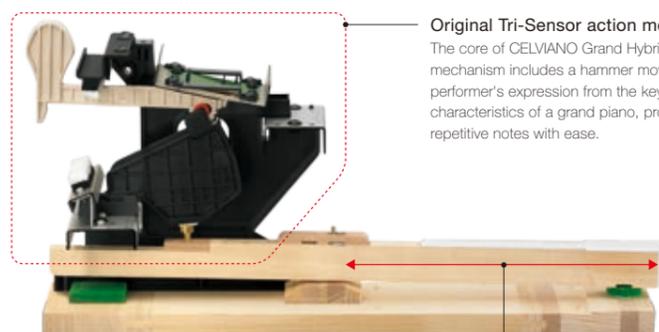
Headphone Mode automatically creates a spacious sonic image while wearing headphones, recreating the feeling of playing an acoustic piano. With the experience of wearing headphones significantly enhanced, pianists can enjoy playing naturally and feeling the sound field of a traditional grand piano.



Touch

Natural Grand Hammer Action Keyboard

For an authentic piano touch, Casio has developed a keyboard system called the "Natural Grand Hammer Action Keyboard." This keyboard system features high-quality wooden keys as well as hammers that follow the same path of motion as in a grand piano. CELVIANO Grand Hybrid features keys that are manufactured using exactly the same materials as an acoustic grand piano. Careful attention is paid not only to the finish of the surfaces of the keys but also to the quality of the wood employed for the key beds. This combination of an outstanding action mechanism and superior-quality key materials further enhances the sensation of playing an acoustic grand piano.

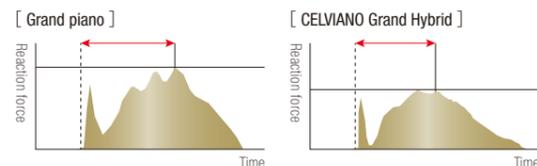


Original Tri-Sensor action mechanism

The core of CELVIANO Grand Hybrid's keyboard performance is created by Casio's proprietary action mechanism. This mechanism includes a hammer movement modeled from a grand piano and three sensors, which accurately capture a performer's expression from the keys. Since there are no physical strings, Casio's action is able to exceed the performance characteristics of a grand piano, providing superior playability that enables pianists to perform such actions as trills and repetitive notes with ease.

Comparison of keyboards' dynamic characteristics

*Keystroke speed At approx. 300 mm/sec. (mf degree of performance power)



Beyond simply detecting the overall force of a key being played, the entire travel of the key is precisely modeled after the behavior of a grand piano

Fulcrum distance from keys

The position of the fulcrum with respect to the keys is exactly the same as with a grand piano. This contributes to stable playing performance, since the touch is never heavier or lighter depending on the position at which a finger strikes a key.

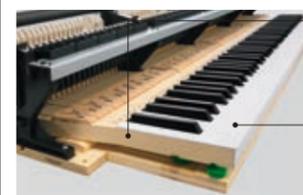
Casio's technology for enhancing control of strokes between soft and strong playing

Natural volume changes and wide expression

With the new GP-510BP and GP-310BKWE, they are designed with high precision to ensure that changes in the dynamics pressure from the player's fingers are similar to that of a grand piano. As a result of Casio's repeated simulations and fine adjustments, all with the aim of perfecting the relationship between volume change and key pressure, players can naturally control the sound volume across a wide spectrum of tonal colors between pianissimo and fortissimo as if playing an acoustic grand piano.

Precision keyboard return speed

Casio has conducted a thorough study of the speed at which grand piano keys return to their normal position after they are struck. This research has finally led to the development of a keyboard action with a consistent return speed and stable responses across the range of the instrument.



Wooden Keyboard

The invisible back parts of both white and black keys are also made of wood. Even the keyframe that withstands the keystroke force is made of high-quality wood, making the piano so comfortable to play that the pianist won't tire.

Keyboard surface materials

The use of acrylic for the white keys and phenol for the black keys — the same materials that modern grand pianos employ. This creates a welcome and familiar touch. Pianists will feel comfortable and confident on the keys of CELVIANO Grand Hybrid.



The keyboard is constructed using Austrian spruce of the finest quality. Careful attention is paid to drying and processing of this high-quality material before keyboard construction begins.

The keyboard is developed to ensure superior piano performances by considering each of the 88 keys independently and how they perform together as a single unit. Perfection of the keyboard is pursued as well through attention to such factors as load changes and key return speeds.

Features

Concert Play

Playing with an orchestra is an extraordinarily thrilling event. The Concert Play feature demonstrates orchestral performance for a pianist to enjoy an experience of playing as a soloist accompanied by a full orchestra. 15 pieces of music are built in. When you practice, a convenient playback function offers capabilities of play, pause, fast-forward, rewind and A-B segment repeat. Using Slow Mode, the tempo of these pieces can be slowed to 80% of normal speed as needed.

Concert Play Preset List

①	Piano Concerto No.1 Op.23 1st Mov.	P.I. Tchaikovsky
②	Prelude "Raindrop"	F.F. Chopin
③	Symphony No.9 "An Die Freude"	L.v. Beethoven
④	Je Te Veux	E. Satie
⑤	Vitava (Má vlast)	B. Smetana
⑥	Canon	J. Pachelbel
⑦	Sonate Op.13 "Pathétique" 2nd Mov.	L.v. Beethoven
⑧	Chanson Triste	P.I. Tchaikovsky
⑨	Jesus, Bleibet Meine Freude	J.S. Bach
⑩	Tableaux d'Une Exposition "Promenade"	M. Mussorgsky
⑪	Sonate K.331 1st Mov.	W.A. Mozart
⑫	Polovetzián Dance (Prince Igor)	A. Borodin
⑬	Piano Concerto No.20 K.466 2nd Mov.	W.A. Mozart
⑭	Violin Concerto Op.64 1st Mov.	F. Mendelssohn
⑮	Melody In F	A. Rubinstein

Expanded Concert Play Contents

Additional pieces of music are available to enjoy with the Concert Play feature. You can download those pieces from the Internet onto USB flash drives. For details: music.casio.com



Scene

Available with the the GP-510BP, this feature provides the most suitable sound environment to the music performers select to play. The Scene can be created by various combinations of tones, effects and reverberation levels. 15 different Scenes were designed as preset settings according to such themes as composer, musical genre and venue. Users can also customize Scenes and register up to ten of favorite settings.

PRESET 15 USER 10

Scene Play Preset List

	Category	Title	Scene Setting
①	Composer	Chopin	Setting oriented toward performances of Chopin and other representative Romantic movement music
②		Beethoven	Setting oriented toward performances of Beethoven and other representative Classical movement music
③		Debussy	Setting oriented toward performances of Debussy and other representative Impressionist movement music
④		Liszt	Setting oriented toward performances of Liszt and other representative Transcendentalist movement music
⑤		Satie	Setting oriented toward performances of Satie and other representative modern era music
⑥	Musical genre	EZ Listening	Setting oriented toward performances of easy-listening music
⑦		Jazz	Setting oriented toward jazz piano performances
⑧	Tones	Baroque	Setting oriented toward performances of J.S. Bach and other representative Baroque era music
⑨		Toccata & Fuge	Setting for music such as pipe organ performances in a cathedrals
⑩		Ragtime	Setting oriented toward performances of ragtime music
⑪	Place	Lesson	Setting oriented toward performances of practice pieces
⑫		Concert	Setting oriented toward concert or recital practice
⑬		Listener	Setting oriented toward practice while confirming audibility for audience
⑭		Extreme Demo	Setting for making acoustic simulator effects conspicuous and easily accessible
⑮	Reset	Default	Setting of initial BERLIN GRAND tone status

Features

Recording Functions

[Audio Recorder]

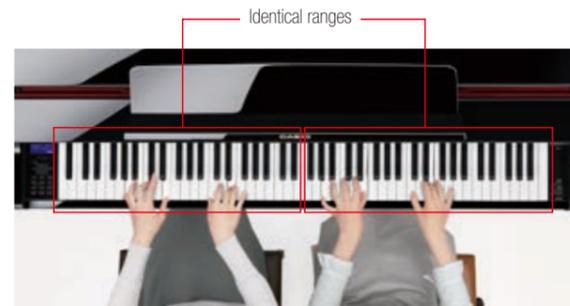
CELVIANO Grand Hybrid pianos have the ability to record performances on USB flash memory available on the market as stereo audio files (44.1 kHz, stereo .WAV format). Recordings can be stored or played back on a computer or transferred to CDs or other media. The piano's built-in full playback function permits use of such features as pause, fast-forward, rewind and A-B segment repeat.

* Software available on the market may be required for producing CDs.



Duet Mode

The keys to the left and right of center on the keyboard can be set to the same tonal range. This Duet Mode is convenient when two players, such as a parent and child or a teacher and student, practice together.



Layer and Split

The layer function enables pianists to overlap two types of tones, while the split function lets them separate tones into lower and upper blocks.

[MIDI Recorder]

This function enables players to record their own performances freely in the CELVIANO Grand Hybrid's memory. It helps users improve their playing skills by reviewing their own performances objectively afterwards. This full playback function permits use of such features as pause, fast-forward, rewind and A-B segment repeat during playback.

Music Library

CELVIANO Grand Hybrid includes 60 piano pieces in its "Music Library." The scores for these pieces are included and CELVIANO Grand Hybrid's features are ideal for learning. Left and Right hand parts can be practiced separately. Tempo can be changed and an A-B segment repeat allows you to practice a section of the piece. Each piece has a selected preset tone but players can enjoy their own choice from the Berlin Grand, Hamburg Grand and Vienna Grand and tones.

* Some musical scores are not published due to copyright issues.

Ergonomic Interface

Intuitive control of CELVIANO Grand Hybrid is possible through a simple, considerably designed control panel. The Berlin Grand, Hamburg Grand and Vienna Grand are easily accessed with dedicated buttons for each piano tone.



■ CELVIANO Grand Hybrid Specifications

	GP-510Bp	GP-310Bk	GP-310We
Keyboard	Natural Grand Hammer Action Keyboard	Natural Grand Hammer Action Keyboard	Natural Grand Hammer Action Keyboard
Number of sensors	3	3	3
Materials	High-grade Austrian Spruce	High-grade Austrian Spruce	High-grade Austrian Spruce
Key Surface	Acrylic	Acrylic	Acrylic
White Keys	Phenol	Phenol	Phenol
Black Keys	Phenol	Phenol	Phenol
Touch Response	5 sensitivity levels (Heavy 2, Heavy 1, Normal, Light 1, Light 2), off	5 sensitivity levels (Heavy 2, Heavy 1, Normal, Light 1, Light 2), off	5 sensitivity levels (Heavy 2, Heavy 1, Normal, Light 1, Light 2), off
Sound Source	AIR Grand Sound Source	AIR Grand Sound Source	AIR Grand Sound Source
Multi-dimensional Morphing	●	●	●
Acoustic Simulator	●	●	●
Resonance System	String Resonance	10 levels, off	10 levels, off
Damper Resonance	10 levels, off	10 levels, off	10 levels, off
Open String Resonance	10 levels, off	-	-
Aliquot Resonance	10 levels, off	-	-
Action Sound System	Damper Noise	10 levels, off	10 levels, off
Pedal Action Noise	10 levels, off	-	-
Key On Action Noise	10 levels, off	10 levels, off	10 levels, off
Key Off Action Noise	10 levels, off	10 levels, off	10 levels, off
Hammer Response	10 levels, off	10 levels, off	10 levels, off
Key Off Simulator	●	●	●
Lid Simulator	●	●	●
Max. Polyphony	4 types	4 types	4 types
Number of Built-in Tones	256	256	256
3 Legendary Piano Tones	●	●	●
Duet	●	●	●
Layer	●	●	●
Split	●	●	●
Sound System	Grand Acoustic System	Grand Acoustic System	Grand Acoustic System
Top Board Open / Closed	●	●	●
Volume Sync EQ	3 levels, off	3 levels, off	3 levels, off
Headphone Mode	●	●	●
Amplifiers	30 W×2 + 20 W×2	30 W×2 + 20 W×2	30 W×2 + 20 W×2
Speakers	16 cm×2 + (10 cm+5 cm)×2 3-way, 6-speakers	16 cm×2 + (10 cm+5 cm)×2 3-way, 6-speakers	16 cm×2 + (10 cm+5 cm)×2 3-way, 6-speakers
Effects	Hall Simulator	12 types	12 types
Listening Position Settings	Player's Position	1 type	1 type
Listener's Position	3 types	3 types	3 types
Chorus	4 types	4 types	4 types
Brilliance	7 levels (-3 - 0 - +3)	7 levels (-3 - 0 - +3)	7 levels (-3 - 0 - +3)
DSP	● (Preset for some tones)	● (Preset for some tones)	● (Preset for some tones)
Pedals	Grand Pedal System	Grand Pedal System	Grand Pedal System
Number of Built-in Pedals	3 (Damper, Soft, Sostenuto)	3 (Damper, Soft, Sostenuto)	3 (Damper, Soft, Sostenuto)
Half Pedal Damper Effect	● (Continuous recognition)	● (Continuous recognition)	● (Continuous recognition)
Half Pedal Position	5 levels (-2 - 0 - +2)	5 levels (-2 - 0 - +2)	5 levels (-2 - 0 - +2)
Performance Setups	Scene	15	-
Number of Setups	User	10	-
Preset	15	15	15
Songs	Concert Play (Audio Song)	Number of Preset Songs	15
Song Expansion	Web Download	Via USB flash memory	Via USB flash memory
Playback Mode	2 (LISTEN, PLAY)	2 (LISTEN, PLAY)	2 (LISTEN, PLAY)
Controller	PLAY/PAUSE, FF, REW, REPEAT, TEMPO DOWN (80% of normal tempo)	PLAY/PAUSE, FF, REW, REPEAT, TEMPO DOWN (80% of normal tempo)	PLAY/PAUSE, FF, REW, REPEAT, TEMPO DOWN (80% of normal tempo)
Music Library (MIDI Song)	Number of Songs	60	60
Preset	User	10	10
Lesson Function	Right hand off, Left hand off	Right hand off, Left hand off	Right hand off, Left hand off
Controller	PLAY/PAUSE, FF, REW, REPEAT, TEMPO CHANGE	PLAY/PAUSE, FF, REW, REPEAT, TEMPO CHANGE	PLAY/PAUSE, FF, REW, REPEAT, TEMPO CHANGE
Grand Piano Tone Demo	Number of Preset Songs	6	6
Recorder	MIDI Recorder	Real Time Rec, up to 5000 notes	Real Time Rec, up to 5000 notes
Number of Songs / Tracks	1 song, 2 tracks	1 song, 2 tracks	1 song, 2 tracks
Controller	PLAY/PAUSE, FF, REW, REPEAT, TEMPO CHANGE	PLAY/PAUSE, FF, REW, REPEAT, TEMPO CHANGE	PLAY/PAUSE, FF, REW, REPEAT, TEMPO CHANGE
Audio Recorder / Playback	Format	Max. 99 songs, approximately 25 min./song	Max. 99 songs, approximately 25 min./song
Storage	Linear PCM, 16bit, 44.1kHz, stereo .WAV	Linear PCM, 16bit, 44.1kHz, stereo .WAV	Linear PCM, 16bit, 44.1kHz, stereo .WAV
Controller	USB flash memory	USB flash memory	USB flash memory
PLAY/PAUSE, FF, REW, REPEAT	PLAY/PAUSE, FF, REW, REPEAT	PLAY/PAUSE, FF, REW, REPEAT	PLAY/PAUSE, FF, REW, REPEAT
Other Functions	Metronome	●	●
Octave Shift	● (-2 octaves - 0 - +2 octaves)	● (-2 octaves - 0 - +2 octaves)	● (-2 octaves - 0 - +2 octaves)
Key Transpose	● (-12 semitones - 0 - +12 semitones)	● (-12 semitones - 0 - +12 semitones)	● (-12 semitones - 0 - +12 semitones)
Tuning Control	A4 = 415.5Hz - 440.0Hz - 465.9Hz (0.1Hz units)	A4 = 415.5Hz - 440.0Hz - 465.9Hz (0.1Hz units)	A4 = 415.5Hz - 440.0Hz - 465.9Hz (0.1Hz units)
Scale Function	Number of Preset Temperaments	Equal temperaments plus 16 others	Equal temperaments plus 16 others
Terminals	USB TO HOST	●	●
USB TO DEVICE	●	●	●
MIDI IN / OUT	●	●	●
PHONES	2 (Stereo standard jack)	2 (Stereo standard jack)	2 (Stereo standard jack)
LINE IN	2 (L / MONO, R), Standard jack	2 (L / MONO, R), Standard jack	2 (L / MONO, R), Standard jack
LINE OUT	2 (L / MONO, R), Standard jack	2 (L / MONO, R), Standard jack	2 (L / MONO, R), Standard jack
Power Supply	DC 24V	DC 24V	DC 24V
AC Adapter : AD-E24500LW	AC Adapter : AD-E24500LW	AC Adapter : AD-E24500LW	AC Adapter : AD-E24500LW
Power Consumption	38 W	38 W	38 W
Auto Power Off	●	●	●
Included Accessories	Music Stand	●	●
Score Book	●	●	●
Bench	●	●	●
AC Adapter	● (AD-E24500LW)	● (AD-E24500LW)	● (AD-E24500LW)
Unit Size and Weight	Dimensions	1,434×489×963 mm (w/o music stand)	1,434×489×963 mm (w/o music stand)
Weight	78.5 kg	78.5 kg	78.5 kg
Color / Finish	Polished Black	GP-310Bk: Satin Black	GP-310We: Natural White Wood
EAN Code	4971850362500 *	GP-310Bk: 4971850362524 *	GP-310We: 4971850362531 *
UPC Code	079767362508 *	GP-310Bk: 079767362522 *	GP-310We: 079767362539 *

GP-510Bp TONE LIST

- BERLIN GRAND
- BERLIN GRAND MELLOW
- BERLIN GRAND BRIGHT
- HAMBURG GRAND
- HAMBURG GRAND MELLOW
- HAMBURG GRAND BRIGHT
- VIENNA GRAND
- VIENNA GRAND MELLOW
- VIENNA GRAND BRIGHT
- GRAND PIANO MODERN
- GRAND PIANO ROCK
- GRAND PIANO JAZZ
- GRAND PIANO POP
- GRAND PIANO DANCE
- HONKY-TONK PIANO
- PIANO PAD
- ELECTRIC PIANO 1
- ELECTRIC PIANO 2
- ELECTRIC PIANO 3
- FM E.PIANO
- 60'S E.PIANO
- HARPSICHORD
- VIBRAPHONE
- STRINGS 1
- STRINGS 2
- SYNTH-PAD
- PIPE ORGAN 1
- PIPE ORGAN 2
- JAZZ ORGAN
- ELECTRIC ORGAN 1
- ELECTRIC ORGAN 2
- ELECTRIC ORGAN 3
- ACOUSTIC BASS
- RIDE BASS
- ELEC.BASS

GP-310Bk/We TONE LIST

- BERLIN GRAND
- BERLIN GRAND MELLOW
- BERLIN GRAND BRIGHT
- HAMBURG GRAND
- HAMBURG GRAND MELLOW
- HAMBURG GRAND BRIGHT
- VIENNA GRAND
- VIENNA GRAND MELLOW
- VIENNA GRAND BRIGHT
- GRAND PIANO MODERN
- GRAND PIANO ROCK
- GRAND PIANO JAZZ
- ELECTRIC PIANO 1
- ELECTRIC PIANO 2
- ELECTRIC PIANO 3
- FM E.PIANO
- 60'S E.PIANO
- HARPSICHORD
- VIBRAPHONE
- STRINGS 1
- STRINGS 2
- PIPE ORGAN
- JAZZ ORGAN
- ELECTRIC ORGAN 1
- ELECTRIC ORGAN 2
- ACOUSTIC BASS
- RIDE BASS

* Availability varies by area.