



### The advent of the C-30 Digital Harpsichord

C-30 Digital Harpsichord compellingly provides the beautifully delicate sound of that traditional keyboard instrument, the harpsichord. Roland hopes to make this wonderful sound available to more people and to enable the experience of harpsichord playing to be easily enjoyed at home and other convenient places. This was the vision behind the creation of the C-30 Digital Harpsichord.



While the harpsichord is a magnificent instrument, the space it requires and the high cost of good instruments have worked against its general popularity. Acoustic harpsichords are also susceptible to going out of tune due to changing temperature and humidity. Before sitting down to play, acoustic harpsichord players need to have the skills and time to tune the instrument. These maintenance needs and other inconveniences have made it hard for the harpsichord to be played or to be heard as much as it deserves. While paying due respect to all the factors that make the traditional instrument such a joy to play and hear, Roland applied modern ingenuity and used advanced technology to design an up-to-date harpsichord that is much easier to get along with. As an instrument that can now easily be enjoyed in any home, Roland has given the traditionally high-maintenance harpsichord a new lease of life.

Until now, unless they first learned the piano, it was hard for people who were enchanted by the sound of the harpsichord to have any hope of playing one. Now the C-30 Digital Harpsichord makes the experience and the charms of the harpsichord, which flourished in the magnificent splendor of the Baroque Period, available to the world of today.

### A brief account of acoustic harpsichords

The harpsichord is a keyboard instrument that creates sound by plucking strings. Bach knew it by the Italian name, Cembalo. At the court of Louis XIV, the French name clavecin was used. Whatever the name, the first instruments started appearing in 14th and 15th century Europe. Then, until the development of the piano during the course of the 18th century, the only keyboard instrument that rivaled the harpsichord was the pipe organ.

The sound of the harpsichord is exceptionally delicate and beautiful, making it well suited to solo playing. It also compliments the sound of other instruments and has been popular in ensembles or for accompanying various other instruments and the human voice. In the 20th century, the harpsichord enjoyed a resurgence in popularity as an instrument for playing music from the 16th to 18th centuries and it still remains popular today.

Various types of harpsichord were made in different countries and in different times. If you compare the keyboard design of traditional French and Italian harpsichords, and of allied instruments such as the spinet and virginal, you will soon notice that individual instruments very much have their own distinctive characteristics. The key size and the number of keys varies, and when you come to play, the touch may be very different. No keyboard ever became standard.



French harpsichord  
A fine example of a French harpsichord



Virginal  
A fine example of a virginal Made in Brescia, Italy, circa



Early Italian harpsichord  
A fine example of an early Italian harpsichord



Spinet  
A fine example of a spinet Made by Stephen Keene,

Made by Francois Blanchet II,  
Paris, 1765  
Two 61-note keyboards: 2 x 8', 1  
x 4'  
FF to f3: coupler and buff stop

1800  
62 keys: BB to c4

Made in Florence, circa 1640  
51 keys: 2 x 8'; C to d3

London, early 18th century  
52 keys: GG/BB to d3

\*Source: Hamamatsu Museum of Musical Instruments Illustrated Collection Catalog III: European Keyboard Instruments  
Photos of harpsichords, which are a part of the museum collection, provided by Hamamatsu Museum of Musical Instruments.

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## The sound of acoustic harpsichords

The volume of sound is hardly affected by how hard the key is pressed. Consequently, greater sound is provided by using a single keyboard operation to pluck more than one string at a time and softer sound is obtained by use of a mute.

<b>8-foot pitch I</b>	Known as the 'back eight,' this basic sound is soft and thick.
<b>8-foot pitch II</b>	The string is plucked near the end of its sounding length. Often called "front eight," the sound produced is bright and quite distinctive.
<b>4-foot pitch</b>	An octave above 8-foot. It provides an ornate sound when played together with 8-foot.
<b>Lute</b>	When a buff of felt or similar material is applied to 8-foot strings, the sound resembles the sound of the lute, the ancestor of the guitar.

### Note

- The names for the different groups of strings in harpsichords are derived from the length of pipes in pipe organs. The basic length is 8 feet, 4 feet is double the pitch, or an octave higher.
- On large harpsichords with two keyboards, three strings can normally be plucked by a single key. The timbre and volume are different if the strings are played singly or simultaneously. This is known as register.

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## Tuning methods (temperaments)

During past generations, in order to produce pleasant harmonies according to the musical principles of the time, a number of tuning methods were tried. For acoustic harpsichords and pipe organs the following five tuning methods are most commonly encountered. Another great thing about the C-30 is that you can switch between these just by pressing a button.

<b>Equal temperament</b>	The scheme used for present-day pianos. Giving free play to transposition, each octave is divided into 12 tones. Even when transposing, harmonics do not change.
<b>Werckmeister</b>	This well-balanced temperament allows all tonalities to be used and the harmonics of each tonality are distinct. Somewhat similar to equal temperament, Werckmeister is relatively easy to use. It was widely used during Bach's lifetime.
<b>Kirnberger</b>	While close to Werckmeister, the harmonies are even more well defined. Transposition is possible but quite difficult. This tuning method was used in the generations after Bach.
<b>Vallotti</b>	Like Werckmeister, close to equal temperament and there is also no restriction on transposition.
<b>Meantone</b>	Commonly used for pipe organs. The trade off for producing beautiful thirds is the limit on the musical keys that can be used. Consequently, transposition is quite restricted.

### Note

Tuning method makes a big difference to the sound. For example, Bach sounds different if you use Werckmeister, the temperament prevalent during his generation. Now, you can enjoy music that accurately recreates the world of sound that the composers imagined. You can properly understand how music was written with knowledge of the kind of changes in feeling that would be brought about by key changes.

## Special advantages as a digital harpsichord

- Light weight, petite design. You can easily move it to any room you like.
- It is simple to disassemble the keyboard and stand. You can easily use an ordinary car to transport this harpsichord to venues or rehearsals.
- No need for regular tuning or pre-performance adjustments. You can just turn on and play anywhere.
- Literally switch instruments. A single button push lets you select the right historical tuning method to match the musical concepts of the time when works were composed.

- Even with a single keyboard, you can play as if there are two manuals.
- Positive organs, fortepiano, and celesta are built in. You can enjoy the authentic experience of playing music from a number of different eras.
- You can turn the volume down or use headphones. Play late into the night without disturbing other people. Practice at any time.
- You can turn the volume up. If you play in an ensemble, you can adjust the volume according to the number and type of other instruments.
- Expressiveness that only digital technology can provide. Now you can vary sound dynamics when you play a harpsichord. With this new ability to vary expressiveness on the harpsichord according to how strongly you play each note, and with damper pedal effects, you can enjoy playing music scored for the piano.