Roland
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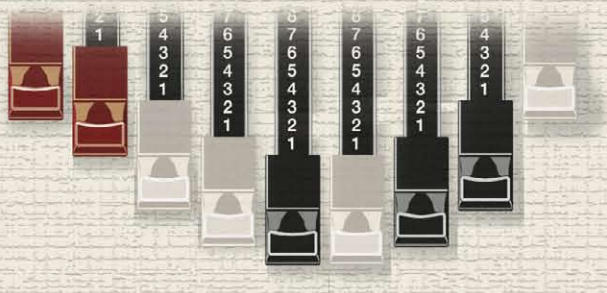
Exploring the new MUSIC ATELIER

MUSIC ATELIER

Registration Reference Book



MUSIC
ATELIER
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【 I n d e x 】

Chapter 1

The history of the organ

The difference between the organ and the piano

The organ and the piano are often spoken of as the king and queen of keyboard instruments, and have been loved for centuries.
The two instruments have very different methods of musical expression, and the performance techniques of both have developed in unique ways.

The piano produces sound by a hammer striking a string, and allows a variety of musical expressions to be produced mainly by varying the keyboard touch.

Playing strongly will produce brighter and louder sounds.
Playing softly will produce softer and quieter sounds.

By varying the keyboard playing dynamics, the performer can produce subtle differences in volume and tone that arise from differences in the vibrations of the physical strings.

Fig.1-1: The piano - the queen of keyboard instruments

Fig.1-2: The organ - the king of keyboard instruments

The organ, on the other hand, has the same mechanism as a wind instrument, producing its sound by sending air through pipes.

Differences in the material or shape of the pipes and in how the pipes are made to speak will of course produce differences in the sound produced by those pipes. By combining various pipes of different sizes and types, the performer can produce sounds to convey a huge diversity of musical feeling.

It is fair to say that the organ's greatest distinction is being able to produce entirely different characters of sound from the same keyboard.

The continued evolution of the organ

One pipe organ can express a complex and diverse range of sounds that rivals an orchestra, giving it good reason to be called the king of instruments.

The pipe organ has shared its history with the development of church music, and has grown larger as a result of its pursuit of larger audiences and greater diversity of expression. Some organs have more than 10,000 pipes. Valves that allow air to reach the pipes determine which pipes will sound. The player creates the desired sound by opening valves for the pipes that he or she wishes to sound. This is why the switching mechanisms that allow pipes to sound are called “stops.”

Fig.1-3: A pipe organ in a church

Fig.1-4: Theatre Organ

As science and technology made astounding progress from the latter half of the 19th century through the 20th, some inventors thought of ways in which the organ could be made a smaller and more approachable instrument. Motorized air blowers and stops that were controlled by electromagnets are examples in which cutting-edge technology of the time were applied to organ manufacture. A remarkable example of this is the theater organ. The theater organ is a pipe organ designed specifically for the theater, and took the world by storm as a way to provide accompaniment for silent movies. Its distinctive sound still has many fans today.

An important turning point in the history of organs came in the first part of the 20th century, with the appearance of the “Hammond organ,” a more portable electronic organ that uses toothed wheels and electronic circuits to replace pipes. The “Leslie speaker” which aimed to reproduce the resonance of a great pipe organ in an ordinary living room also had a revolutionary impact on the Hammond organ. Countless musicians were captivated by its sound, and eagerly brought the electronic organ into many musical styles such as pop, jazz, and rock.

In every era, the organ has taken advantage of new technological developments, changing its form, yet continuing to preserve its culture and traditions while becoming easier to use and more approachable by people around the world. Today, the organ is able to produce the sounds of many different instruments, along with rhythm and automatic accompaniment functions, earning it a place as a home organ that can be used to perform a wide range of musical styles.

The attraction of the Music Atelier

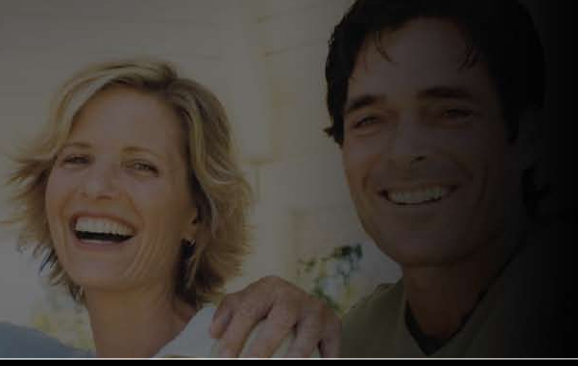
Roland's **Music Atelier** organs represent this continued evolution in which the traditional sounds, performance techniques, and design of the organ are maintained while continuing to pursue new possibilities of musical expression.

The Music Atelier delivers not only the sounds of world's great organs, but also many high-quality instrumental sounds for immediate use. Numerous sounds used in performance genres and styles such as pipe organ, orchestra, jazz, pop, and theater are provided for your choice.
For example, there are pop sounds such as piano and guitar, orchestral sounds such as strings and brass, or ethnic sounds such as erhu and yangqin, all capturing the rich resonance and liveliness that are characteristic of acoustic instruments. There are also sound effects such as the sound of car engines or horns, as well as human voices such as soprano or tenor.

Fig.1-5: Roland's Music Atelier organs (AT-900)

The organ is an instrument that you can play with both hands and both feet. It goes without saying that the Atelier series includes many features that help you play these sounds to their fullest advantage.
The buttons that select sounds (corresponding to the stops of a pipe organ) are arranged in separate sets for the upper keyboard, lower keyboard, and pedal keyboard. They are organized into different groups of sound; Organ, Symphonic, Orchestral, and Solo. You can instantly select the instrumental sound that you want to play solo (such as violin or trumpet) or as an ensemble (orchestral).

Fig.1-6: Sound selection buttons corresponding to "stops" (AT-900)



The 76-note lower keyboard has a broader range than a conventional organ, giving you plenty of room to play piano songs. It can also be divided into as many as four parts, letting you play percussion + three sounds, and giving you a rich array of performance expression from a single keyboard that rivals a three-manual keyboard instrument.

Fig.1-7: An example of splitting the keyboard into four parts

Registrations allow you to store your sound and rhythm settings so that you can instantly recall them with a touch of a single button.

Fig.1-8: The registration buttons

Fig.1-9: The harmonic bars

Jazz organ and rock organ sounds have their own power to get your body moving. **The harmonic bars** (drawbars) are an ideal way to create these sounds. From 16-foot to 1-foot, these allow you to adjust the volume of each pitch and create tones in an intuitive way. You can also use the maroon-colored solo harmonic bar to add various instrumental sounds such as brass or strings, greatly expanding your expressive performance potential.

True to its name of Atelier (studio), this cutting-edge home organ is a place where you can freely combine sounds into a limitless spectrum of tones.

Now let's take a closer look at the characteristics of each bar.

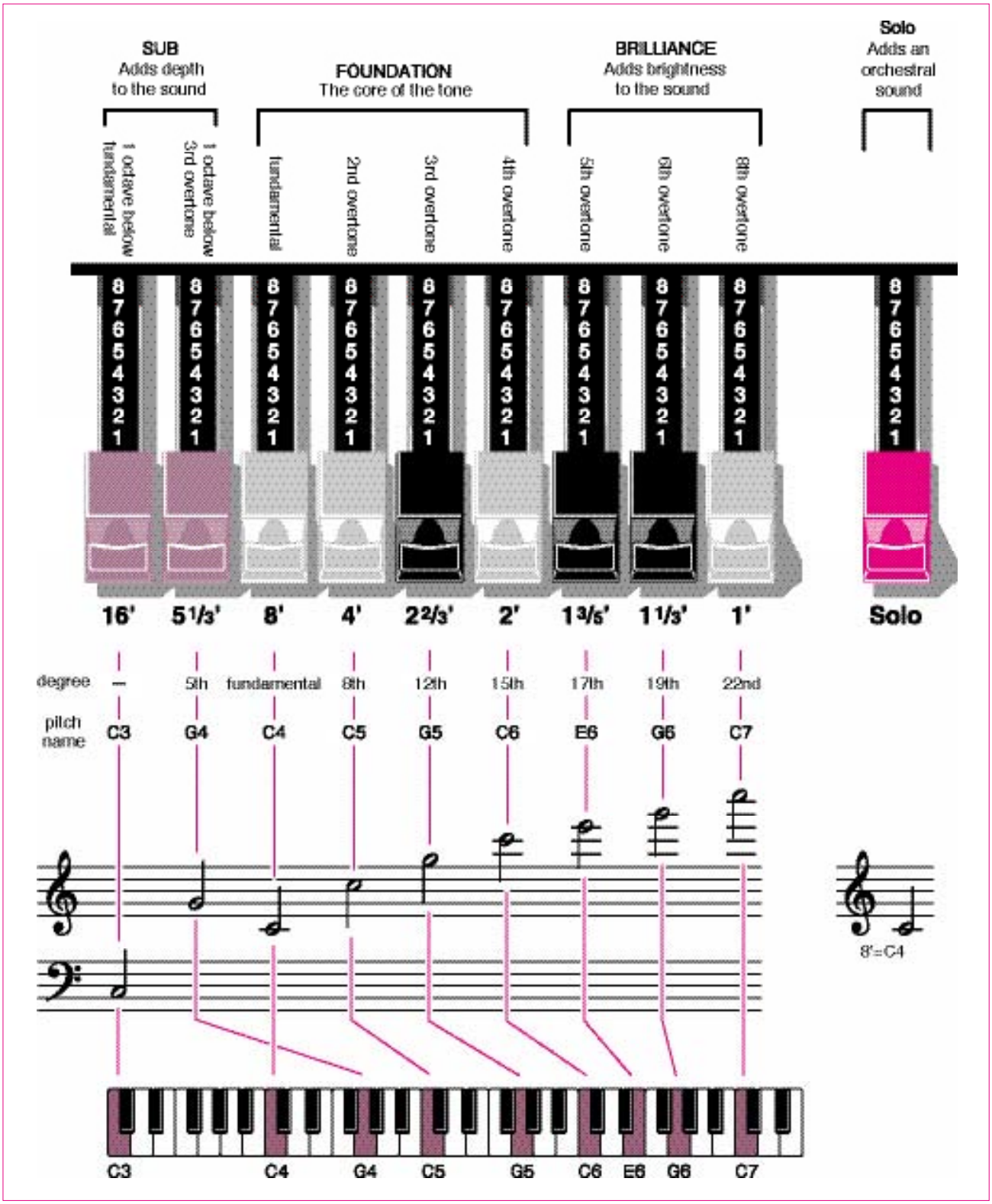


Fig.2-7: The tone and pitch of each bar

Chapter 3

Using the harmonic bars

The four organ types DVD Chapter 01

The numerous ways in which harmonic bars are pulled out to create various tones may seem complicated, but they can actually be categorized into the following four groups. If you have a good grasp of the characteristics of these four tone groups and have a solid understanding of their basic character, you'll be able to come up with virtually infinite variations on them.

It's useful to remember these tone groups according to the shape (pattern) in which the harmonic bars are pulled out, as shown in the illustration below.

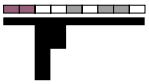
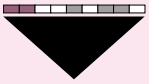
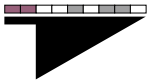
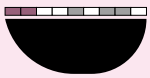
No.	Group	Shape (pattern)	Characteristics
1	Flute-type		Essentially the fundamental and the second overtone. Sometimes a bit of the third overtone is added.
2	Reed-type (brass-type)		More of the middle bars. Often the third overtone is used more heavily than the fundamental.
3	Foundation-type (diapason-type)		Strong fundamental and second overtone. Weaker toward the higher overtones.
4	Strings-type		Relatively weak fundamental and second overtone, with stronger high overtones.

Fig.3-1: The shape of the bars pulled out

To become familiar with how to set the harmonic bars, you should be aware of the following points.

1. Start with the specified registrations.

Commercially published organ scores contain registrations (e.g., 00 8400 000) specified by many great organists. Start by setting the harmonic bars to these settings, and gain an appreciation of these great sounds.

2. Then make some adjustments.

The tone will be affected by the location in which you're performing. You'll want to adjust the brightness of the tone to suit the size and shape of the room, and the material of the walls and floor. It's easy to make adjustments; simply move the harmonic bars in or out. Pay attention to the volume balance between the upper and lower keyboards and the pedal keyboard.

3. Create your own registrations.

Try creating your own registration that sounds best to you for the song you're playing. It's also good to create several different registrations for the same song and compare them. As you gain experience, you'll come to intuitively know the appropriate registration simply by looking at the score, the tempo, the expression markings, the movement of the melody, and the type of rhythm. Your own original registration is a reflection of your distinctive musical personality.

4. Write down your discoveries.

When you've run across a nice registration in a printed score, or come up an original registration that you particularly like, be sure to write it down.

Flute

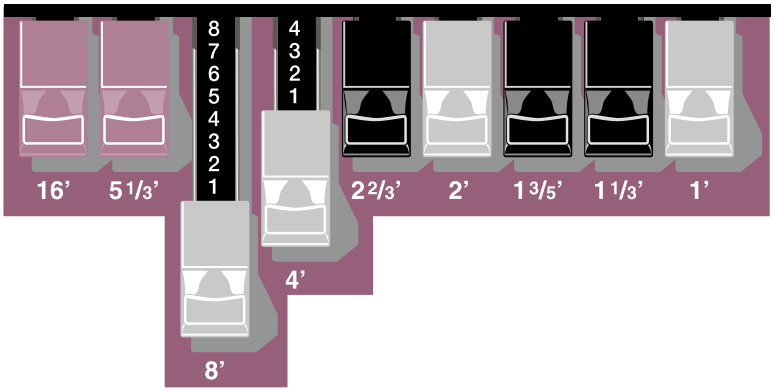


Fig.3-4: A flute-type setting

Of the four types of tone, flute-type sounds consist of the simplest overtones. The fundamental (8′) is mainly used, and smaller amounts of the second overtone (4′) and sometimes a bit of the third overtone (2-2/3′) are added. A variety of flute-type sounds can be produced by adding or subtracting to these overtones.
The most typical flute sound is produced by the following setting, shown in the illustration above.

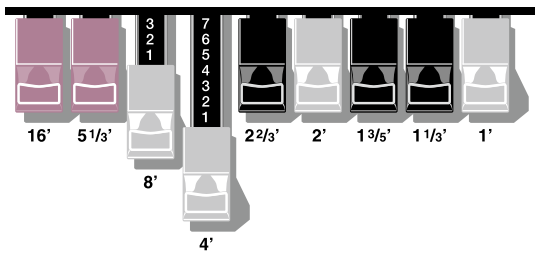
Open Flute	00 8400 000

If you want to decrease the volume while leaving the tone unchanged, reduce the level of the two drawbars while leaving the 8′ bar at double the level of the 4′ bar. Changing the proportion as in [00 7300 000] would affect the tonal character as well.

Open Flute	00 6300 000
Open Flute	00 4200 000
Open Flute	00 2100 000

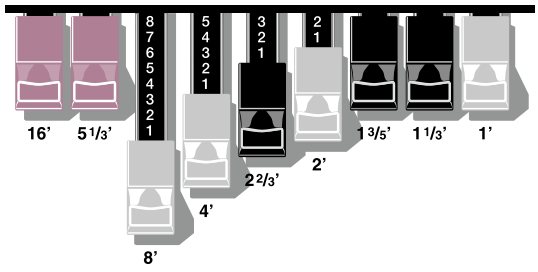
Changing the proportion of the third and fourth bar will produce a light concert flute sound.

Light Concert Flute	00 3700 000



The [Open Flute] discussed above is a sound produced by a pipe organ's flute pipe open at the top end. To turn this into the sound of a flute pipe with air being blown into it more strongly, add two overtones (2-2/3′ and 2′) shaped so that the number decreases as you move toward the right.

Full Open Flute	00 8532 000



Performing with an Articulation Voice

When performing with an Articulation Voice, there are several points you should keep in mind in order to obtain the richest and most realistic performance. Let's go through these points one by one.

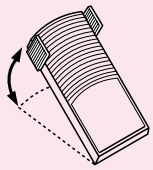
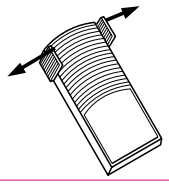
Term	Meaning	
Keyboard touch	An Articulation Voice is able to change its sound in response to your keyboard touch. Initial touch will vary the dynamics, and aftertouch will vary the vibrato. You can adjust the sensitivity for each of these. The transitions between notes will be smooth when you play legato, and each note will be sharply defined with a clear attack when you play staccato.	
Expression pedal	The expression pedal will control the dynamics. This will change not only the volume but also the tone, so using the expression pedal is an important part of an expressive performance.	
Foot switch	For an Articulation Voice, you can use the foot switch to produce effects that are distinctive of that instrument. There is a foot switch on each side of the expression pedal, and you can select the function that is assigned to each of these foot switches, left and right. There are two foot switch settings (ART.CONTROL 1, 2), and they will control different effects depending on the type of Articulation Voice.	

Fig.5-11: Tips for playing an Articulation Voice

Making the optimal settings for playing an Articulation Voice

In order to play an Articulation Voice most effectively, you'll need to make controller settings such as for Solo mode or the foot switches. The Articulation Voice screen contains an Auto Set function that makes this easy. When you use this function, the controllers will be automatically set as follows.

Item	Specified value
After Touch	ON
Solo Mode	POLYPHONIC
L Foot Switch	ART.CONTROL1

Fig.5-13: Controllers automatically assigned by the Auto Set function

Fig.5-12: Auto set button

Using the D Beam effectively (AT-900/900C/800/500)

Fig.5-22: Control simply by moving your hand

The D Beam controller has been newly added to the Music Atelier. This allows you to apply an effect or produce percussion sounds simply by moving your hand above the controller, without having to press a button or play the keyboard.

Operation is simply a matter of moving your hand over the controller, so it's easy to use even while you're performing. The D Beam controller also adds a visual element to your concert performance, since your audience will be able to see you using it. This section explains the D Beam controller and how to use it.

Applying effects to the sound

DVD Chapter 22-24

When you press one of the three buttons [Pitch], [Filter], or [Volume] located at the left of the D Beam controller, the button indicator will light red. Now when you move your hand above the D Beam controller, one of the following effects will be applied.

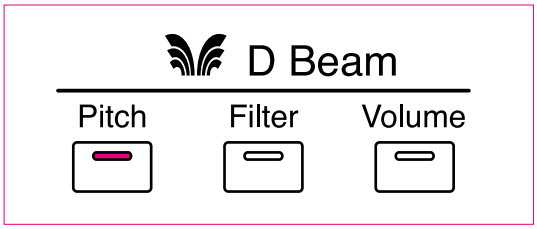


Fig.5-23: When the indicator is lit red

Button	Effect
Pitch	This effect lowers the pitch of the sound being played in the upper keyboard. As you move your hand closer to the D Beam controller, the pitch will gradually fall. The distance by which it falls will be the same as the "Pitch Bend Range" setting that adjusts the sensitivity of the pitch bend lever. Pitch bend is effective when playing phrases on solo instruments such as violin, sax, or trombone. For trombone in particular, movements of your arm will correspond to the movements of the slide, making this effective in a visual way as well.
Filter	This effect modifies the tone of the sound being played in the upper keyboard, making it darker and more mellow. It is an effective way to add slight tonal changes to the sound. A filter will produce a particularly obvious effect on synthesizer sounds. When used on a trumpet sound, this will simulate the result of opening or closing a mute. This is particularly nice for big-band performances. However, the filter effect will not work on some sounds due to the way in which they are constructed (*1).
Volume	This effect reduces the volume of the sound being played in the upper keyboard. Since it is controlled independently of the expression pedal, you can use this to add expression to the sound of the upper keyboard without affecting the overall volume. When playing a solo phrase, using this volume function instead of the expression pedal lets you use your hand to control subtle nuances in the phrase.

Fig.5-24: Effect applied when the button indicator is lit red

(*1)

Orch.Str.Ens	Er Hu	HarpsiSingle	HarpsiDouble	ChungRuan	TromboneSolo
AEx AltoSax	OB Pad	Theater Bass	String Bass	Jazz Vibes	

Fig.5-25: Sounds to which the Filter effect will not apply