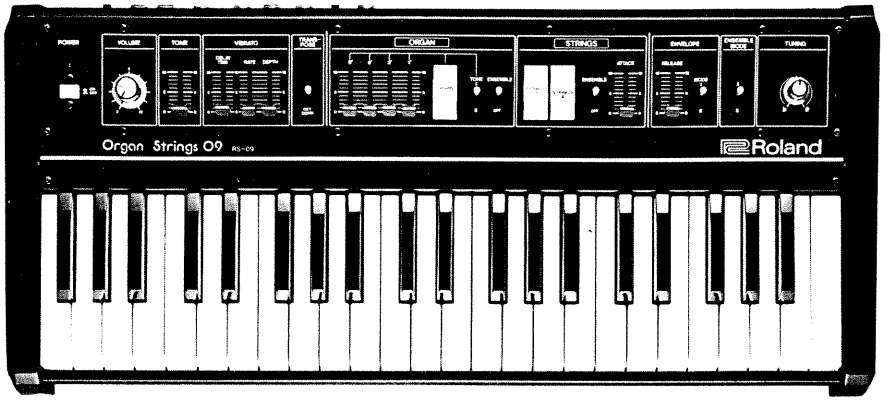
Roland

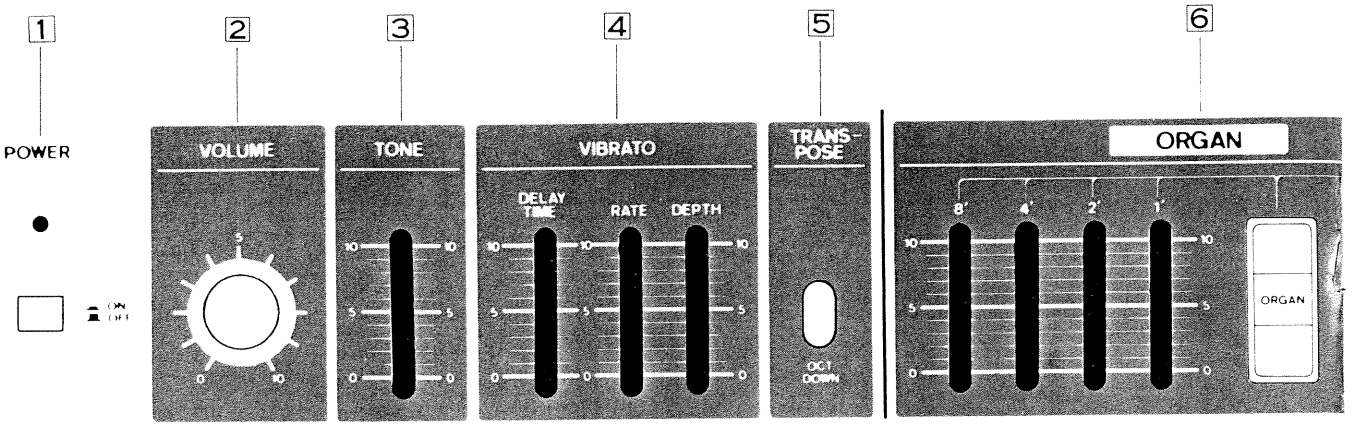
# Organ/Strings

# RS-09 OWNER'S MANUAL




• RS-09 is a keyboard mechanism that produces the sound of the strings as well as the rich sound of the organ.
Equipped with a 2-channel output and an ensemble capacity, you can create a deep and wide range sound with a stereo or PA system. And with the external input jack, you can add the ensemble effect to the sounds of various electronic and electric instruments. In connecting RS-09 to other synthesizers (SH-1), you can get a similar effect to a polyphonic synthesizer.

# FUNCTIONS OF THE COMPONENTS




## KEYBOARD

RS-09 is in itself a 44-key, 3 1/2 octave synthesizer.
However with feet and TRANSPOSE, in effect the sound range is over 7 octaves as seen in the score (P.7) (The possible simultaneous sound range is over 6 octaves.)

## 1 POWER (Power Switch)

Switching on the power will light up the pilot lamp above the switch and RS-09 is ready for operation.

## 2 VOLUME (Master Volume)

This knob determines the volume.

## 3 TONE (Tone Control)

This slider adjusts the tone quality. The further you slide it upward, the more emphasis is put on the higher sound range. Make adjustments according to your taste and to the kind of amplifier used.

## 4 VIBRATO

### RATE

This slider controls the speed of the vibrato. The further you slide it upward the faster it becomes.

### DEPTH

This slider controls the depth of the vibrato. The further you slide it upward, the deeper it becomes.

### DELAY TIME

This slider determines the time from when a key is pressed to the start of a vibrato. The further you slide it upward, the longer the time. This is effective when you only want the vibrato effect on a note you want to hold for a long time.
Slide it down completely when you want the vibrato all the time.

## 5 TRANSPOSE

This switch lowers the sound range of the keyboard by one octave. Switching it to DOWN OCT makes 8' to 16', 4' to 8' and 2' to 4'.

## 6 THE ORGAN SECTION

### FEET MIXING VOLUME

This volume mixes the output of 8', 4', 2', and 1' at a desired proportion to create all kinds of tone colors. 4' is an interval one octave above 8', 2' is two octaves above and 1' is an interval three octaves above.

### TABLET

This tablet turns on or off the organ sound.
*ORGAN RAW OUT on the rear panel with on relation to the tablet switch generates as an output, sound mixed by the Feet Mixing Volume.

### TONE (Organ Tone Switch)

This switches the tone color of the organ.
I . . . . . soft tone color
II . . . . . bright tone color

### ENSEMBLE (Ensemble Switch)

This switch turns on or off the ensemble effect.

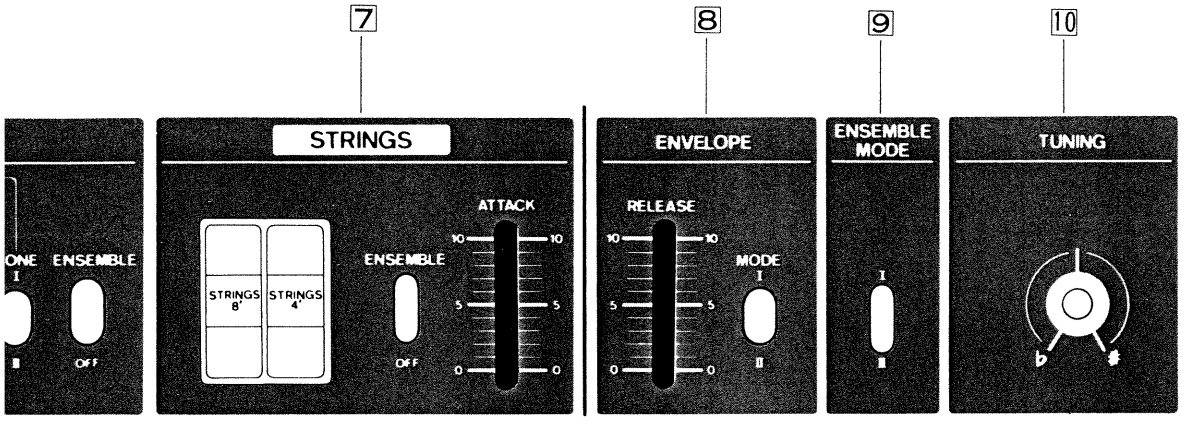
## 7 STRINGS (Strings Section)

### STRINGS 8', 4' Tablet

With this tablet you turn on or off the strings' sound. There are 8' and 4' for strings. 4' is an interval one octave above 8'.

### ENSEMBLE (Ensemble Switch)

This switch turns on or off the ensemble switch.




### STRINGS ATTACK (Attack Time)

This slider controls how the sound is produced from the minute a key is pressed. The further you move it upward the greater the decrease in speed of the attack time.

*The function of ATTACK does not occur unless the key is replayed. Therefore for legato performance, the first note is the only note where ATTACK has any influence on.

## [8] ENVELOPE

### RELEASE (Release Time)

This slider adjusts the time it takes for a sound to fade out after a key is released. The further you slide it upward, the longer the release time.

### MODE (Release Mode)

I . . . . . When a new key is played, a sound is produced after the sound of the key previously pressed fades out completely.

II. . . . . The release note will remain until the established time is up. The replaying of a key does not affect this function.

## [9] ENSEMBLE (Ensemble Mode)

This switches the ensemble effect between:

I . . . . . Dynamic organization with a rich ensemble effect.

II. . . . . Natural ensemble effect.

## [10] TUNING

This knob controls the pitch of RS-09. It works simultaneously for both the organ section and the strings section and the variation range is over high-low, 25 cent.

The center of the knob is tuned to A (442 Hz). Use this level when tuning to other instruments.

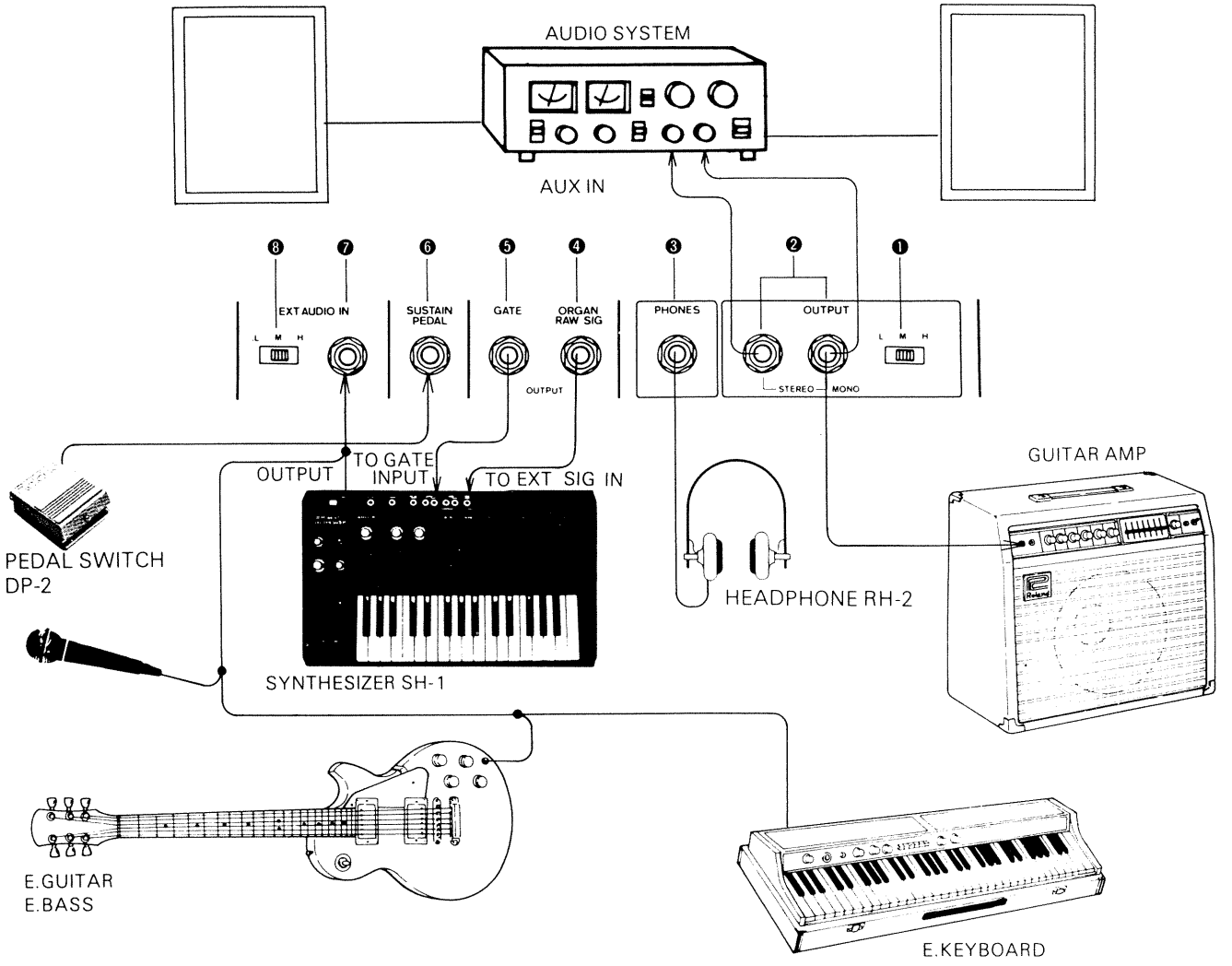
## «BEFORE STARTING»

- Power supply indicated on the name plate must be used. In case that the power supply in your district is different from it, it must be adjusted, using the voltage regulator.
- Because it is operated by AC power, this instrument may sometimes generate a little heat.
  This, however is not a sign of machine failure.

## «NOTES»

- Keep away from interferences that induce high levels of noise. Such as flourescent lamps, neon lights and transformers as much as possible.
- Avoid the use of this instrument in places that are dusty, of high temperature or high humidity.
- Clean the control panel with neutral detergent. Use a soft, dry cloth for the wooden parts. Do not use Solvents such as paint thinner.

# CONNECTION JACKS




**❶ OUTPUT LEVEL Output Level**

Choose among L/M/H according to the input sensitivity of the amplifier used.

| | |
|---|---|
| AUDIO AMPLIFIER | H |
| GUITAR AMPLIFIER | L/M |
| PA, MIXER | H/M/L |

**❷ OUTPUT (Output Jack)**

This jack is for the output of RS-09. To strengthen the ensemble effect, try to use stereo (2-channel).
For 1-channel, always use the MONO jack.

**❸ PHONES (Head phone Jack)**

This jack is for plugging in the headphones. Use a pair (e.g. ROLAND:RH-2) that is stereo. It is geared to VOLUME.

**❹ ORGAN RAW OUT (Basic Organ Wave Form Output)**

This is the jack for generating the basic wave form composed of the feet mixing volume of the organ section.
The output generated from here has no relation with tone ensemble, tablet or volume. As diagramed on the following page, by interconnecting with EXT. SIG. IN of a synthesizer (SH-1) tone color variations controlled by the VCF can be enjoyed.

**❺ GATE OUT (Gate Output Jack)**

This is the output jack of the gate voltage that continues to flow while a key is being pressed.
By interconnecting to GATE IN of a synthesizer (SH-1), you can work the envelope generator of it with the keyboard of RS-09. With a hookup as diagramed on the following page, a variation of each note can be added and it is possible to produce sounds similar to a polyphonic synthesizer.

**❻ SUSTAIN PEDAL (Pedal Connection Jack)**

By connecting the pedal switch DP-2 (sold separately), the sustain (release) effect can be turned on or off by foot.

**❼ EXT. SIGNAL INPUT (External Input Jack)**

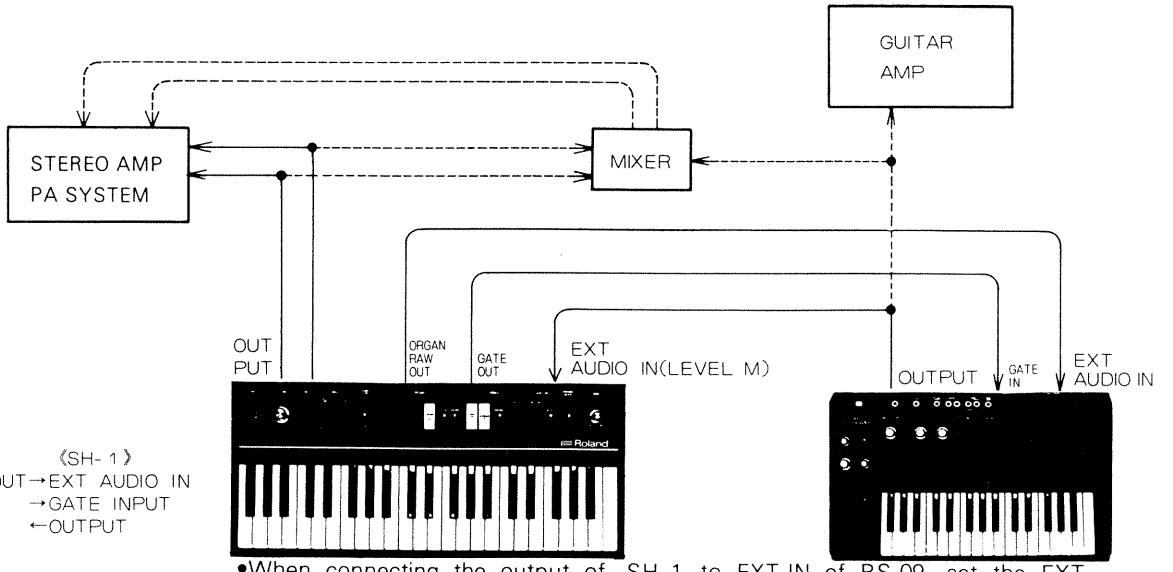
By connecting another electronic or electric instrument to this jack, you can add an ensemble effect to the sound of that instrument.

**❽ EXTERNAL INPUT LEVEL**

Select the correct level according to the output sensitivity of the connected device.

| | |
|---|---|
| SYNTHESIZER | : L/M |
| KEYBOARD, ELECTRIC GUITAR | : M |
| MICROPHONE | : H |

# RS-09+SH-1 (VCF)



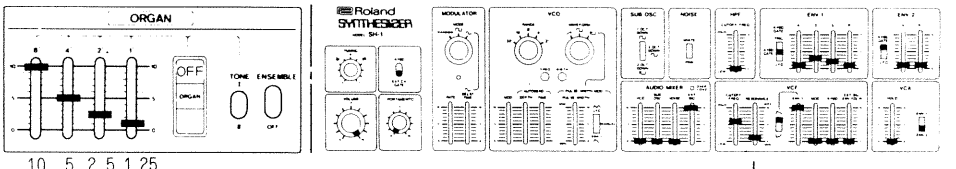

《RS-09》 《SH-1》
ORGAN RAW OUT→EXT AUDIO IN
GATE OUTPUT →GATE INPUT
EXT AUDIO IN ←OUTPUT
(LEVEL M)

•When connecting the output of SH-1 to EXT-IN of RS-09, set the EXT sensitivity of RS-09 to "M" and the master volume of SH-1 to a level where the sound will not be distorted.

By processing the basic organ waveform of RS-09 with the VCF of SH-1, it is possible to create a sound like that of a polyphonic synthesizer.

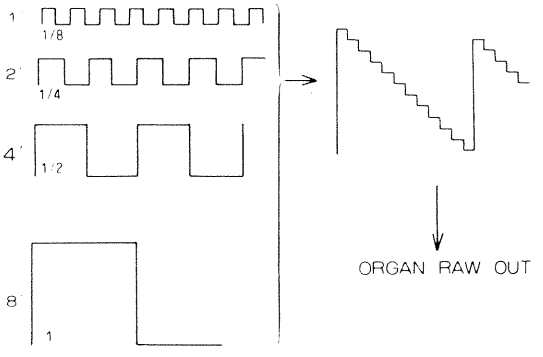
## •SETUP EXAMPLES

RS-09 SH-1




10 5 2.5 1.25

This setup is in correspondence with the ratio of the harmonic content and a sound close to that of a saw tooth wave is generated.




Raising RESONANCE will produce the "wah wah" tone color that is characteristic of a synthesizer.

★ The Determining Factors of Tone Color relieves on the setups of the following:

- •The feet mixer of the Organ Section
- •The VCR Cutoff Frequency
- •VCF Resonance
- •VCF ENV

## VARIATIONS

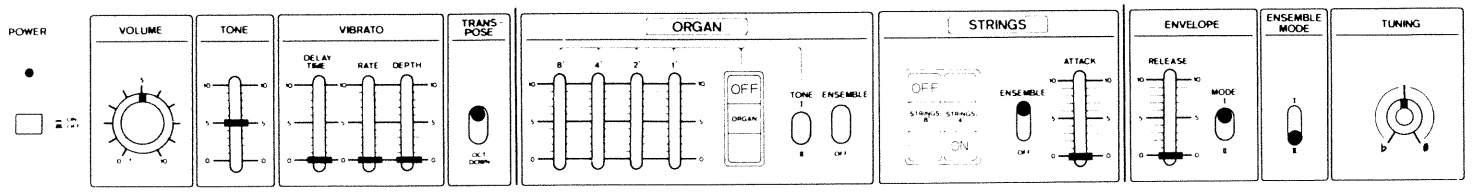
1. **Controlling the VCF of SH-1 WITH A MODULATOR.**
   You can use the LFO to produce a continuous "wah wah" effect or produce a Sample & Hold sound with RANDOM.

2. **The addition of the original RS-09 sound to the processed sound of SH-1.**
   a) Strings of BRASS + SLOW ATTACK
   This is processing a brass sound with SH-1 and adding SLOW ATTACK STRINGS of RS-09 to it.
   b) STRINGS + PERCUSSION
   Select either 2' with the feet mixer and process it to a percussion sound with an ENV of form, using the VCF of SH-1. Add the STRINGS of RS-09 to that.

# SAMPLE SOUNDS

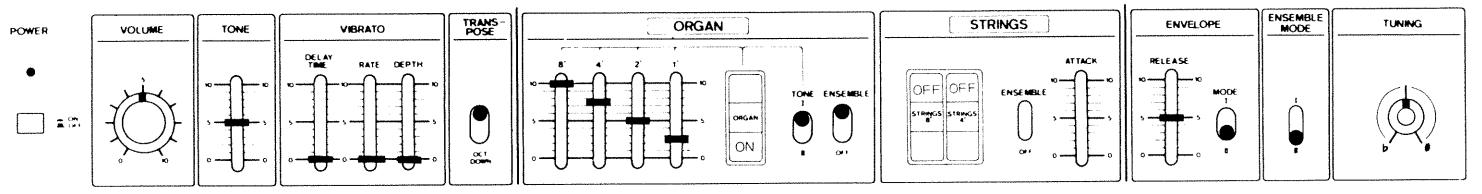
## [1] THE STRINGS

Strings 4' is similar in sound range to the violin. It is effective to get the attack effect of a string with the Strings Attack of the envelope.



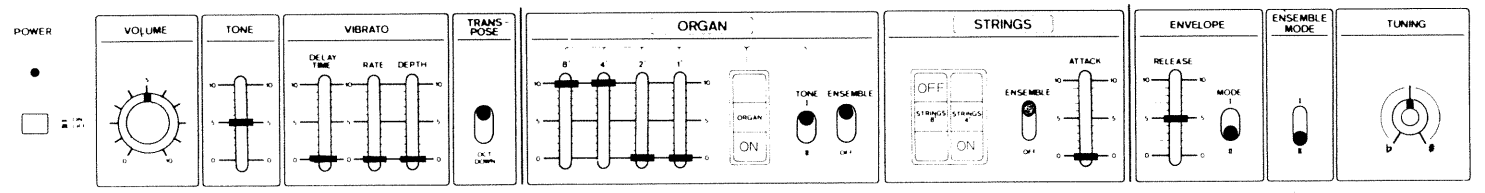

## [2] THE ORGAN SOUND

The combination of the volume of feet mixing can create various organ sounds. The lengthening of release time is also effective.



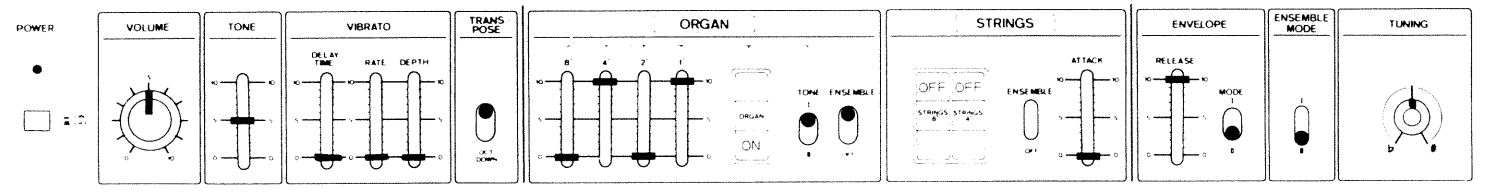

## [3] THE SOUND OF A COMBINATION

The combination of strings 4', organ 8', 4' can create an extremely rich sound.



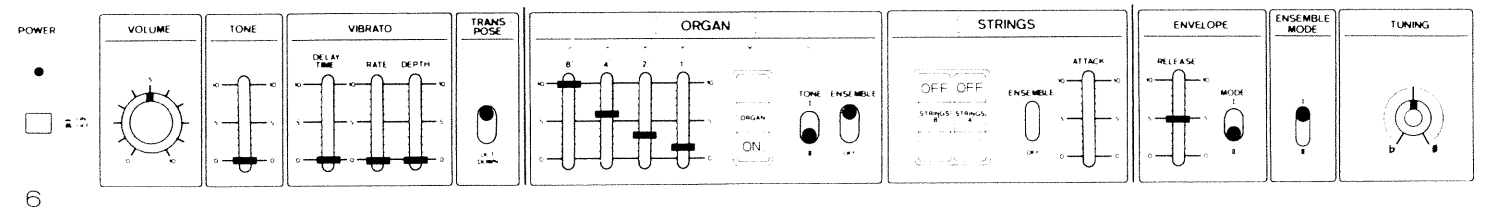

## [4] SUSTAIN ORGAN

By setting the Organ Section to 4' and 1' and RELEASE at "10", you will be able to produce a tone color with a strong sustain-effect much like that of a vibraphone.




## [5] ORCHESTRA SOUND

In adjusting the tone of the amplifier by lowering TREBLE to minimum and raising BASS to maximum, the tone color will be made even milder.

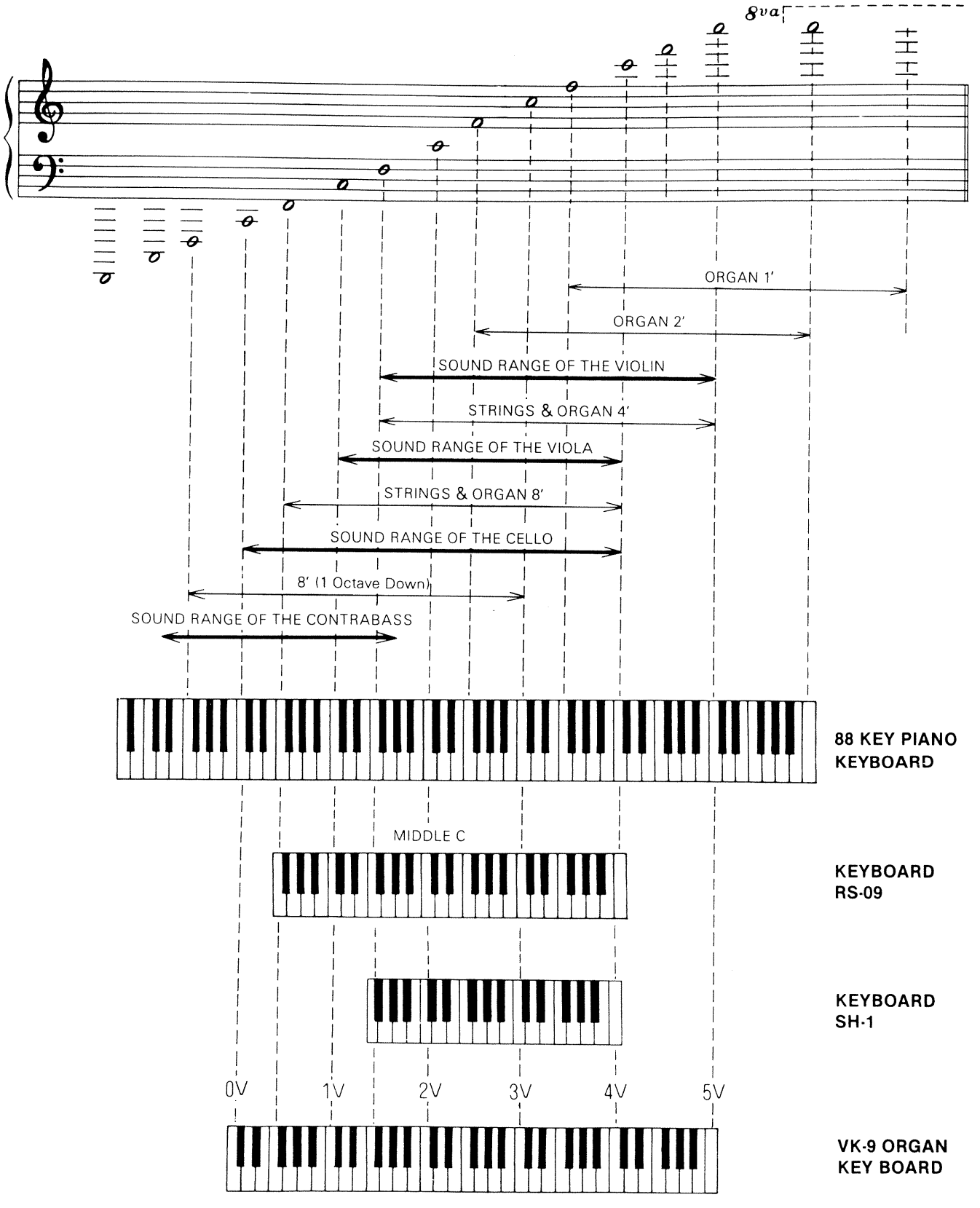


# KEYBOARD

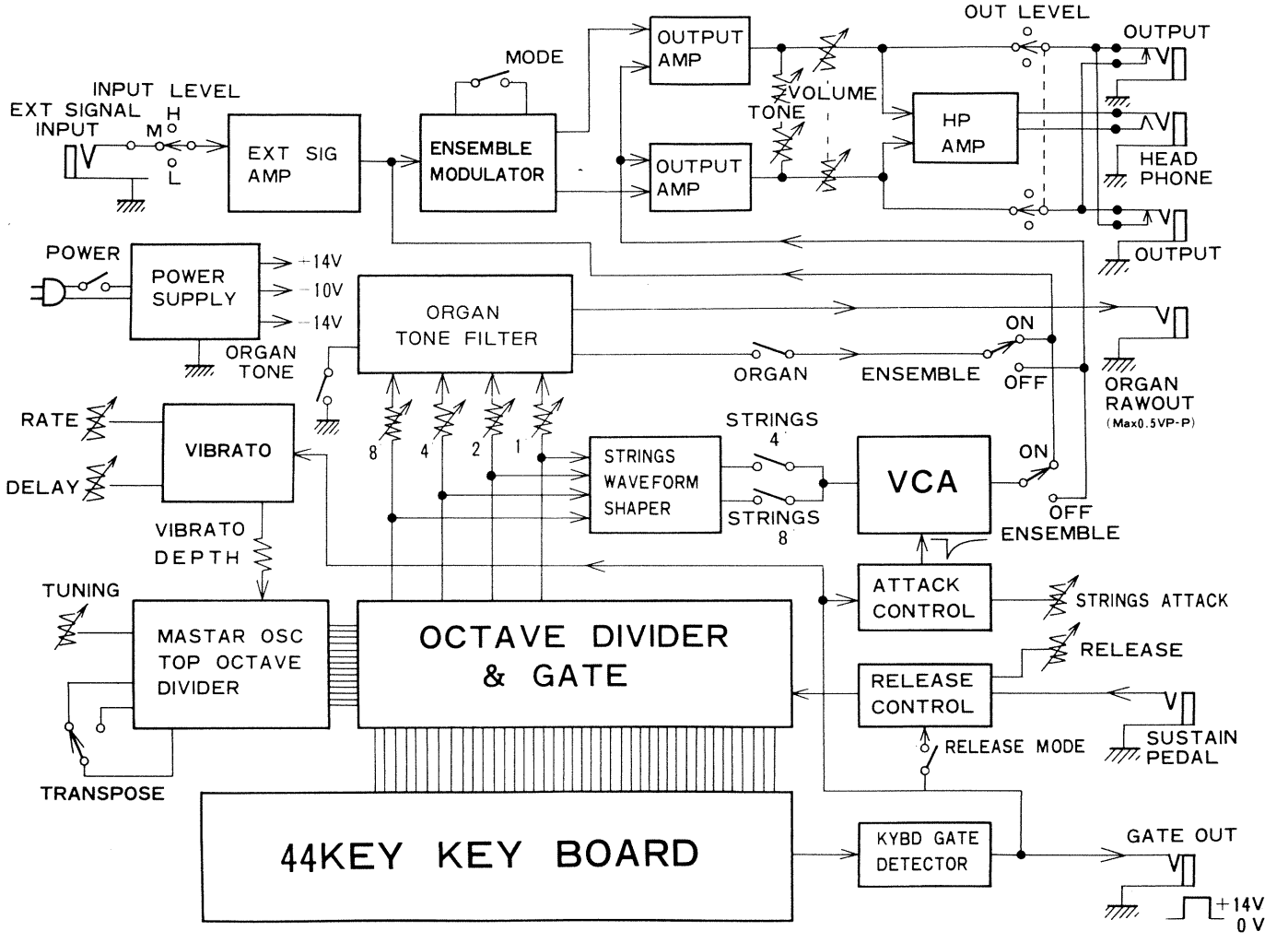
The keyboard range of RS-09 is in itself 44 keys but with the functions of feet and or TRANSPOSE, the range becomes over 7 octaves as seen in the music score below.

When 8' (8 feet) is the basic feet and TRANSPOSE is at a standard position, the middle "C" will be at the position diagrammed below.

Strings 4' covers the sound range of the violin and string 8' covers the sound range of the viola. Also at Strings 8' and TRANSPOSE at OCT DOWN, the sound ranges of a cello or a contrabass will be covered.



# BLOCK DIAGRAM/SPECIFICATIONS




**KEYBOARD (44 keys, 3 1/2 octaves)** :1

**STRINGS SECTION**
- Tablet (8', 4') :2
- Ensemble Switch (ON, OFF) :1
- Attack Time :1

**ORGAN SECTION**
- Feet Mixing Volume (8', 4', 2', 1') :4
- Tablet (NO, OFF) :1
- Tone Switch (I, II) :1
- Ensemble Switch (ON, OFF) :1

**ENVELOPE CONTROL**
- Release Time :1
- Release Mode Switch (I, II) :1

**VIBRATO CONTROL**
- Rate :1
- Depth :1
- Delay Time :1

**ENSEMBLE MODE SWITCH (I, II)** :1

**TONE CONTROL** :1

**TUNING (+25 cent)** :1

**TRANSPOSE (DOWN OCT)** :1

**VOLUME** :1

**POWER SWITCH (with a pilot lamp)**:1

**REAR PANEL**
- Output Jack :2
- Output Level Selector :1 (L = −30dBm/ = −15dBm/H = 0dBm)
- Headphone Jack (8Ω: Stereo) :1
- Organ Direct Output Jack :1 (max. 0.5 Vp-p)
- Gate Voltage Output Jack :1 (OFF:OV/ON: +14V)
- Sustain Pedal Jack :1
- External Signal Input Jack :1
- External Signal Input Level :1 (L = 0dBm/M = −20dB/H = −40dBm)

| | |
|---|---|
| Power Consumption | 15 W |
| Dimensions | 676(W)×306(D)×102(H)mm |
| Net Weight | 7.3kg |
| Accessories (2.5m connection cord) | :2 |

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