Thank you, and congratulations on your choice of the BOSS HR-2 Harmonist. To ensure proper operation and years of trouble-free service, please take the time to read through this Owner’s Manual before starting out.

**FEATURES**

- By selecting the proper key, you can instantly add a two-part harmony to whatever single-note melody you play!
- The pitch and volume of each harmony part can be set independently.
- The HR-2 can also create octave and ‘detune’ effects.

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DETECTOR IN JACK.

For details on setups using the Detector In Jack, see page 12. "HOW TO USE THE Detector In Jack without inputting to Detector."
The Detector In Jack (when using the instrument with the instrument) has been designed.

If you simply connect the output from the other effects unit, or the optional -5 Multiple Jack (or any other), you can directly feed the guitar sound to the output.

Should you wish to input the signal coming from another effects unit, you will need to use the appropriate.

Chords.

The HR-2 is designed to recognize individual notes one at a time, so you must not play pitch of 440 Hz.

Inaccurate tuning will result in inappropriate harmonics. A4 should be tuned so it has a harmonic. To obtain the best results, make sure you have your instrument tuned correctly. The HR-2 can detect the scale of a musical instrument, then outputs the appropriate...
IMPORTANT NOTES
When using an AC adaptor, use only the specified device (PSA Series). Use of any other AC adaptor could result in damage, malfunction or electric shock.

POWER SUPPLY
The power requirement for this unit is indicated on its nameplate (rear panel). Ensure that the voltage in your installation meets this requirement.

If the unit is to remain unused for an extended period of time, unplug the power cord.

PLACEMENT
Do not subject the unit to temperature extremes (e.g., direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas, or areas that are subject to high levels of vibration.

ADDITIONAL PRECAUTIONS
Protect the unit from strong impact.

Should a malfunction occur, or if you suspect there is a problem, discontinue use immediately. Contact qualified service personnel as soon as possible.

To avoid the risk of electric shock, do not open the unit.

CHANGING THE BATTERY
Remove the battery whenever the unit is to remain unused for an extended period of time.
2. CHECK INDICATOR

Disconnect the AC adapter from the AC outlet.

This LED indicates whether the effect is ON/OFF, and also doubles as a battery check. The indicator lights when the effect is ON/OFF.

3. AC ADAPTOR JACK

Accepts connection of an AC adapter (BOSS PSA-S, optional). By using an AC adapter, you can play without battery power. You have 6-hour battery power when you have fully charged the battery. After fully charging, you can play for about 4 hours. Please refer to the Battery Information in the next page.

4. OUTPUT LEVEL

The output level is adjusted by the OUTPUT LEVEL knob. Turn it clockwise to increase the level, and counterclockwise to decrease the level.

5. INPUT LEVEL

The input level is adjusted by the INPUT LEVEL knob. Turn it clockwise to increase the level, and counterclockwise to decrease the level.

6. STEREO VOLUME

The volume balance between the stereo left and right outputs is adjusted by the STEREO VOLUME knob.

7. DETECTION IN

The input signal is divided into left and right, and the effect is applied separately to each channel. This is the detection input.

8. TONE CONTROL

The tone is controlled by the TONE CONTROL knob. Twist it clockwise to make the sound brighter, and counterclockwise to make the sound darker.

9. EFFECT ON/OFF

This switch turns the effect on/off. When the switch is pressed, the effect is on; when the switch is released, the effect is off.

10. EXPRESSION PEDAL

By using an optional foot pedal, you can control the volume automatically as you play. Please refer to the Expression Pedal Information in the next page.
effect is ON, the battery is near exhaustion and should be replaced immediately.

3. OUTPUT Jacks A(MONO)/B
The output jacks are used to connect the unit to amplifiers or other devices. The harmony parts set with the VOICE A and B knobs will be output to OUTPUTs A/B. To output a monaural signal, use only the A(MONO) jack (VOICEs A/B will be output through A(MONO)).

4. Pedal Switch
This switch turns the unit ON/OFF.

5. Thumbscrew
This thumbscrew is loosened to open the pedal, allowing battery replacement. For instructions on how to replace the battery, please refer to "CHANGING THE BATTERY" on page 16.

6. INPUT Jack
This jack accepts input signals (coming from a guitar, some other electric or electronic musical instrument, or another effects unit).

* When you direct the output signal from an external effects unit to the HR-2, be sure to input the guitar sound directly to the DETECTOR IN Jack. If you connect the output signal of the other effects unit without using DETECTOR IN, the pitch of the harmony will be inaccurate.

* The INPUT Jack also serves as the power switch while using the unit on battery power. Power is turned on whenever a plug is inserted into the INPUT Jack, and is turned off when the plug is disconnected. When not using the unit, you should disconnect any cord connected to the INPUT Jack.

7. DETECTOR IN Jack
The input jack is used to detect the pitch of a musical instrument. When you connect an effects unit before the HR-2, be sure to input the guitar signal directly into the DETECTOR IN Jack.

* For a detailed explanation on the connections using the "DETECTOR IN Jack", see page 12 "HOW TO USE THE DETECTOR IN JACK".
Harmonic Interval

If you fail to select the proper key for the song, the harmony parts will not be of the correct sound. Parts appropriate for each individual input can be fixed with the Harmony Volume Control, one or two harmony parts corresponding to the song to be played. This knob allows you to select the key that

THE EFFECT SOUND

After page 14 "About the SCALE OF SWITCHES A/B"

page 13 "How to SET THE VOICE" for a detailed explanation, see following settings: a 1/2, 1/2h, 1/4h of 1. You can select any of the following settings: a 1/2, 1/2h, 1/4h or 1. These knobs adjust the harmonic interval.

If the EFFECT knob (A/B) is rotated completely counterclockwise, no effect sound will be heard.

These knobs are used to adjust the volume.
MAKING THE CONNECTIONS

* Inserting a plug into the INPUT jack will automatically switch the unit on.

* Before connecting or disconnecting any patch cords, be sure all the volume controls in your system are set to minimum; this will help prevent any damage to system components.

The following illustrates how to connect a guitar directly to the HR-2. If you wish to connect another effects unit before the HR-2, refer to "HOW TO USE THE DETECTOR IN JACK" on page 12.
3. Set the key for the song to be played using the KEY switch.

2. Depress the pedal switch to turn the effect on. Be sure the CHECK indicator lights.

1. When you have made the necessary connections, set the knobs as shown in the illustration.

We recommend that you use a tuner to make sure that your instrument is perfectly tuned.

**OPERATING THE UNIT**
4. Set the harmonic interval of voices A and B separately using VOICE Switches A/B.

5. Adjust the volumes of voices A and B separately using the E. LEVEL Knobs A/B.
HOW TO USE THE DETECTOR IN JACK

When you input a signal from another effects unit into the HR-2, be sure to input the guitar sound directly to the DETECTOR IN JACK using a multiple jack [5 (optiona)] or if you try to input the signal without using the DETECTOR IN, the pitch of the harmony may be inaccurate. For a detailed explanation about how to make the connections, see the following diagram.
HOW TO SET THE VOICE SWITCHES A/B

These knobs allow you to set the harmonic interval of voices A and B separately. The output harmony will be as follows:

+DT/-DT (+/- Detune):
These settings add a sound that is slightly ‘detuned’ from the original input sound. The resulting sound is somewhat ‘fatter’ and more full than the straight input sound. Voice Switch A creates +DT settings that are higher than the input sound, and Voice Switch B creates -DT settings that are lower than the input sound.

-6/-5/-4/-3/+3/+4/+5/+6 (3rd, 4th, 5th, 6th):
Plus or minus a 3rd to a 6th sound will be added to the input sound, creating a harmony part.

+OCT/-OCT (+/- 1 octave):
A sound plus or minus 1 octave will be added to the input sound, creating an octave harmony part.

*If you set these two Voice Switches to the same harmonic interval, VOICE A outputs the harmony at the set harmonic interval, while VOICE B outputs the harmony with a Detune effect.*
The H-2 creates its harmony parts based upon the key of the song selected and the unit's scale. For example, if you select C major, the resulting harmony will be as shown below:

```
<table>
<thead>
<tr>
<th>Up</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>D</td>
<td>D</td>
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<tr>
<td>E</td>
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<td>F</td>
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<td>G</td>
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<td>A</td>
<td>A</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>
```
KEY SETTING

The KEY setting you should choose for the music you play will vary as shown below depending on the key signature (♯, ♭) in the music score.

**Major**  C      F      B♭      E♭      A♭      D♭      G♭

**Minor**  Am     Dm     Gm     Cm     Fm     B♭m     Em

**Major**

**Minor**  Em     Bm     F♯m     C♯m     G♯m     D♯m 15
1. Loosen the thumbscrew at the front of the pedal.
2. Remove the battery from the battery housing.
3. Connect the snap cord to the new battery and disconnect the snap cord connected to it.
4. Slip the coil spring onto the spring base on the back of the pedal and then close the pedal.
5. Finally, insert the thumbscrew into the guide hole and fasten securely.

* Be sure to observe battery polarity (+/-).

* Avoid getting the snap cord caught in the coil spring.

* The thumbscrew can be left in the pedal until.

When the indicator goes dim or no longer lights, replace the battery following the steps below.
Twin Lead 1

Twin Lead 2

Defaced Sound

SAMPLE SETTING

Unison Play
SPECIFICATIONS
HR-2 : Harmonist

A/D Conversion ....................... 16 bit linear, 128 times oversampling, \( \Delta \Sigma \) modulation, AF Method
D/A Conversion ....................... 16 bit linear
Sampling Frequency .................. 32 kHz
Nominal Input Level ................. -20 dBm
Input Impedance ..................... 1 M\( \Omega \)
Nominal Output Level ................. -20 dBm
Output Impedance .................... 1 k\( \Omega \)
Dynamic Range ...................... 110 dB or greater (Direct)
........................................ 90 dB or greater (Effect)

Controls ............................... Pedal Switch, E.LEVEL Knobs A/B, VOICE Switches A/B,
........................................ KEY Switch
Indicator ............................... CHECK Indicator (serves also as a battery check)
Connectors ............................. INPUT Jack, OUTPUT Jacks A(MONO)/B, DETECTOR IN Jack,
........................................ AC Adaptor Jack (9 V DC)

About the AF Method (Adaptive Focus Method)
This new method dramatically reduces quantization noise by carrying out the digitization (A/D) in a manner that is optimum for the input signal.
Subject to change without prior notice.

* In the interest of product development, the specifications and/or appearance of this unit are subject to change without prior notice.

0 DBm = 0.775 V rms

Options

- AC adapter PSA-series, Multiple Jack 1-5

Accessories

- Owner's Manual
- Dry Battery 9 V Type (6AM/9 V), Roland Service

Weight

- 420.8 / 15 oz (including battery)
- 2-3/4 (W) x 4-1/16 (D) x 2-3/16 (H) inches
- 70 (W) x 125 (D) x 55 (H) mm

Dimensions

- These figures will vary depending upon the actual condition of use.
- Alkaline: 5 hours
- Expected battery life under continuous use:

Current Draw

- 75 mA (9 V DC)

Power Supply

- 9 V DC: Dry Battery 9 V Type (6AM/9 V), AC adapter
FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

This equipment requires shielded interface cables in order to meet FCC class B Limit.

CLASS B 
NOTICE
This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B 
AVIS
Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.