



HANDSONIC[®] 10

Owner's Manual

Roland[®]



Contents

Features	3
Demo Songs	3
Panel Descriptions	4
Top Panel	4
Display	5
Rear Panel	6
Getting Familiar	7
Basic Operations	7
Preset Kit Buttons	7
Instrument View Mode	7
Positional Sensing	7
D BEAM	8
Ambience	8
Effects	8
Control Knob	8
Basic Editing	9
Assigning a Sound to a Pad	9
PRESSURE	11
EFFECTS (Basic)	12
Naming a Kit	12
D BEAM	13
METRONOME (STYLE GUIDE)	14
Tempo	14
Volume	14
Tempo Change	15
METRONOME (NORMAL)	15
Tempo	15
Beat (Time Signature)	15
Rhythm	15
Metronome Sound	16
Volume	16
COACH MODE	17
Quiet Count	17
Rhythm Check	18
Time Check	18
Pad Follow	19
Auto Up/Down	20
Tap Tempo	20
Advanced Edit	21
ROLL	21
EFFECTS	21
KIT Parameters	22
KIT Volume	22
MIDI	22
TOOLS	23
KIT COPY	23
Restoring an Individual Kit to the Factory Settings	23
KIT EXCHANGE	23
KIT CLEAR	23
PAD COPY	23
PAD EXCHANGE	23
PAD CLEAR	23

LR EXCHANGE	23
UNDO	23
Setup	24
METRONOME	24
AMBIENCE	24
SYSTEM	24
D BEAM	25
Pad Settings (PAD)	25
External Trigger Settings (EXT TRIG)	26
Foot Switch Functions	26
MIDI	27
BULK DUMP	27
FACTORY RESET	27
Short Cuts	28
Favorite Kit Jump Function	28

Appendices

Error Messages/Troubleshooting	29
Effects List	30
Instrument List	34
Kit List	36
Style Guide Metronome Pattern List	37
Glossary	38
Interface Profile	40
MIDI Implementation Chart	42
Specifications	43
Attaching the HandSonic 10 to the Stand (optional)	44
Index	45
MEMO	47
USING THE UNIT SAFELY	48
IMPORTANT NOTES	50

Before using the HandSonic 10, please read the sections, "USING THE UNIT SAFELY" (p. 48) and "IMPORTANT NOTES" (p. 50). They provide important information concerning proper operations of the HandSonic 10. This Owner's manual should be read in its entirety in order for you to understand all features and operations. Keep the manual on hand for reference purposes.

Copyright © 2006 ROLAND CORPORATION
All rights reserved. No part of this publication may be reproduced in any form without the written permission of ROLAND CORPORATION.

Features

410 Sounds

Sound selection is made easy thanks to sound category Groups or Alphabetical listing.

Specially Selected Effects

Ambience (5 Types) and a choice from on-board Multi Effects (20 types) can be used at the same time.

Friendly Interface

The large, custom LCD lets you easily view various functions and information. The panel buttons and the friendly interface make modifying a kit a very simple process. The Control knob gives you instant editing access. The Preset Kit buttons give you quick access to 5 specially selected kits and 5 of your favorite kits.

Pads and Expandability

10 velocity sensitive and pressure reactive pads. 2 of these pads also feature positional sensing. The D Beam can be used for triggering and controlling sounds and effects. The stereo input for external triggers lets you have a choice to use optional kick triggers, a head/rim capable pad, cymbal pads or foot switches (with multi-functions possible).

Play With External Audio Sources

The mix in allows one to connect external audio sources, ideal for playing along with CDs or for connecting external sound modules.

For Improving Techniques

In addition to normal metronome functions, the HandSonic 10 includes a unique Style Guide Metronome, featuring a wide range of rhythmical categories; perfect for learning, practicing and performing.

The Coach Mode's functions include Time Check, Rhythm Check and Pad Follow. These exercises will challenge you and help you to improve your technique.

Set Up & Portability

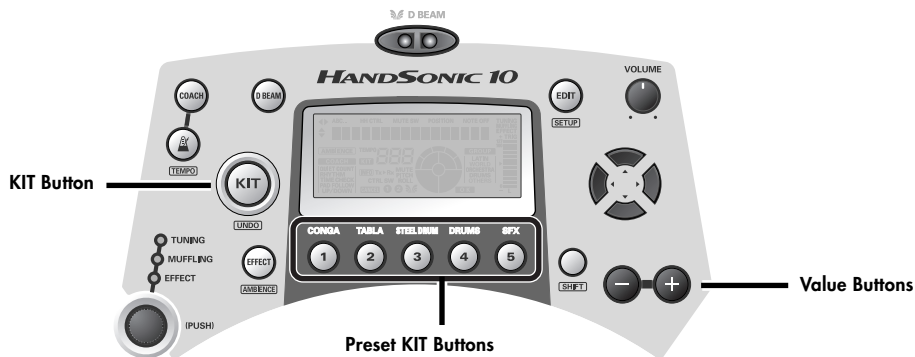
Lightweight and compact, the HandSonic 10 mounts easily on the optional PDS-10 stand, (recommended) or on a cymbal stand when using the APC-33.

This Manual

This manual should be read carefully as it will not only explain WHAT is possible, but will guide you in a friendly way so you can understand HOW to use the on-board sounds, functions and the potential of the incorporated technology.

Demo Songs

To hear some of the HandSonic 10's possibilities, we have incorporated 5 different demo songs.



1. Press the [CONGA] button (or any of the 5 Preset Kit buttons) and hold it down for 2 seconds.

The demo song will start to play.

If you press the [CONGA] button again, the demo song will re-start from the beginning.

If you press any of the other Preset Kit buttons, the demo songs assigned to those will play.

You can also use the [+]/[-] buttons to change songs.

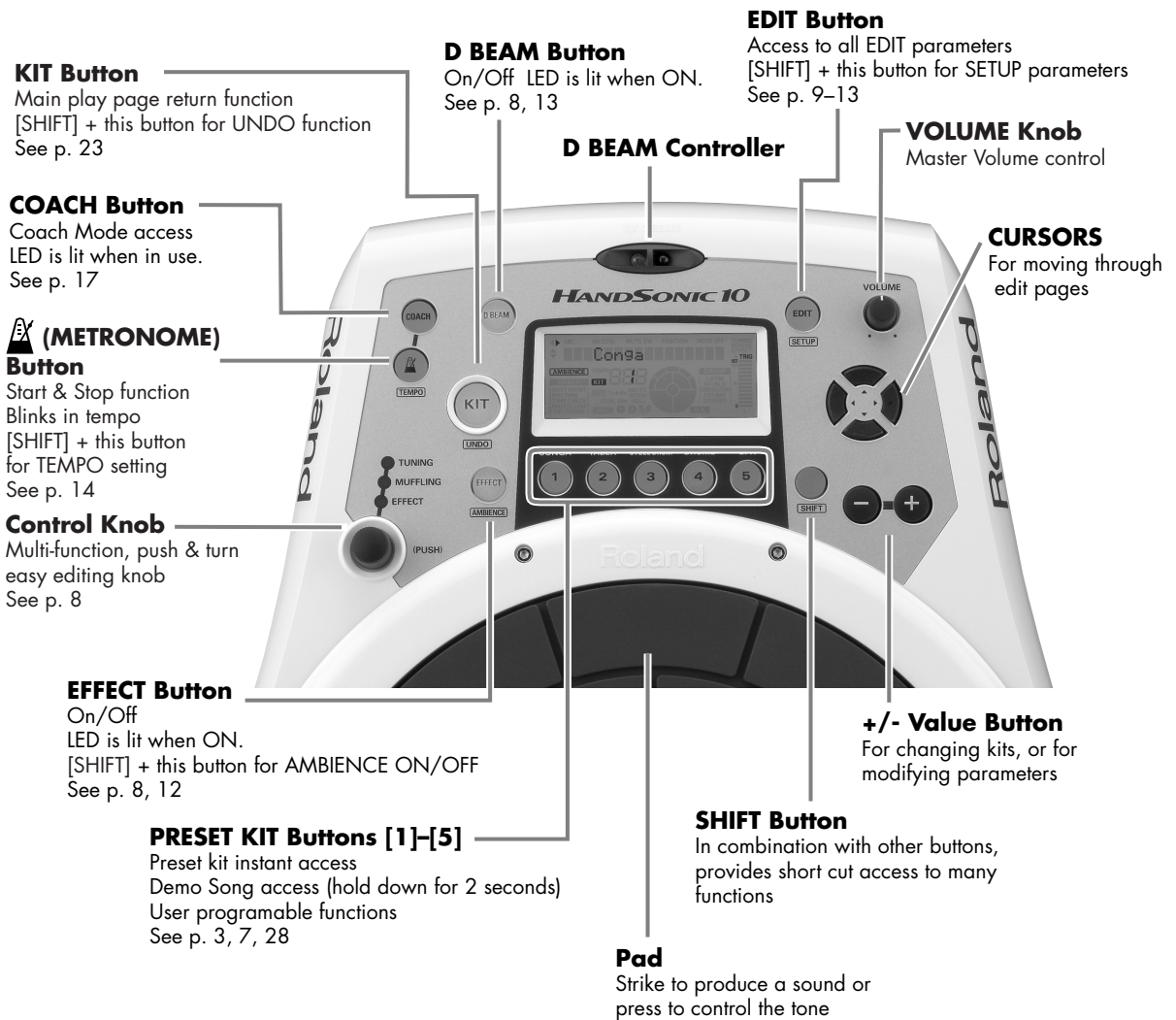
2. To stop the demo, press [KIT] button.

While the demo song is playing, all pads are disabled. Also, the kit being played in the demo song may not be the same as indicated by the button name.

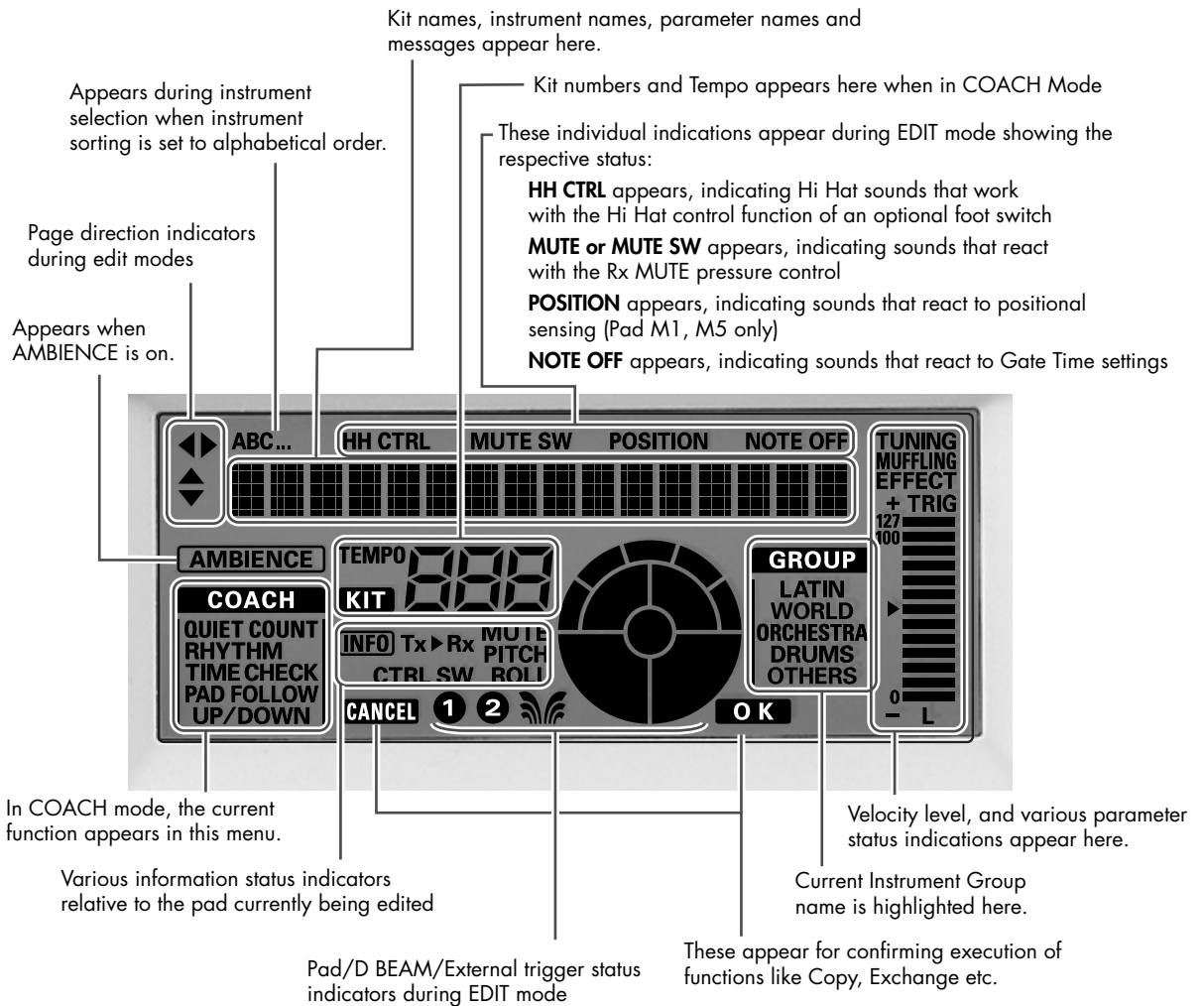
* No data for the music that is played will be output from MIDI OUT.

Panel Descriptions

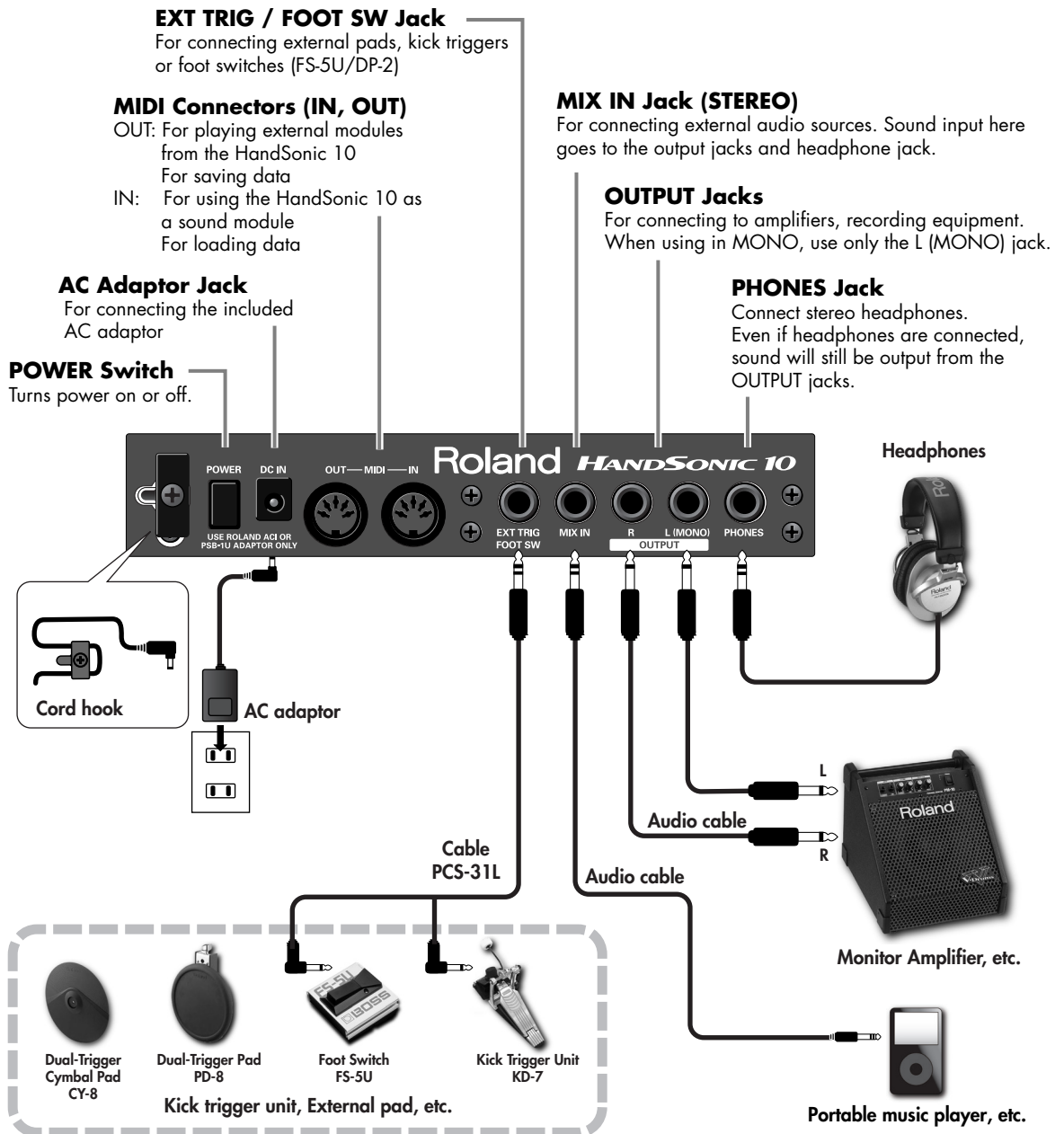
Top Panel



Display



Rear Panel



- * To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.
- * Anchor the power cord, using the cord hook (see diagram). This prevents the plug from being pulled out accidentally, and reduces stress to the jack itself.
- * When connection cables with resistors are used, the volume of equipment connected to the inputs (MIX IN) may be low. If this happens, use connection cables that do not contain resistors.

Getting Familiar

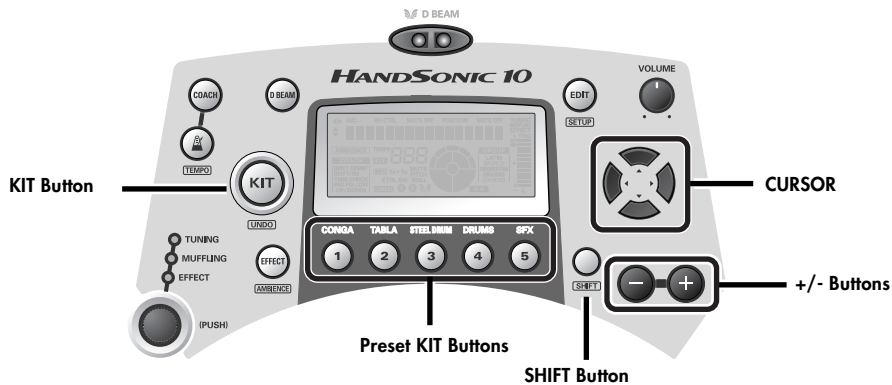
Turning the Power On/Off

Make sure the volume controls on the HandSonic 10, and any connected devices are set to "0." Then turn on the device connected to the MIX IN Jack. Turn on the HandSonic 10's power switch. As there is a built-in protection circuit, it will take a few seconds before you see the kit name appear in the display. Until that time, Do NOT touch any pad, or use the D BEAM. Turn on the device connected to the output jacks. Then adjust the respective volume settings.

When turning the HandSonic off, turn down all respective volumes before turning off the power.

Basic Operations

Preset Kit Buttons



The 5 Preset kit Buttons, [1]–[5], will take you to the indicated kits. These 5 kits can NOT be modified, as they are separate from the 64 user kits. Using the [+]/[-] buttons will let you scroll only through those 5 kits. To return to the user kits, press [KIT]. However, when used in combination with the [SHIFT] button, they can be used to quickly jump to your own pre-determined selection. How to make settings for this function will be explained further on. We'll use a few of these kits to help you get to know the HandSonic.

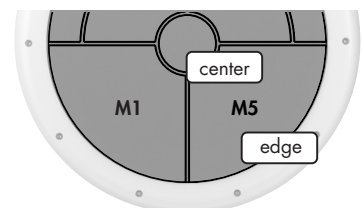
Instrument View Mode

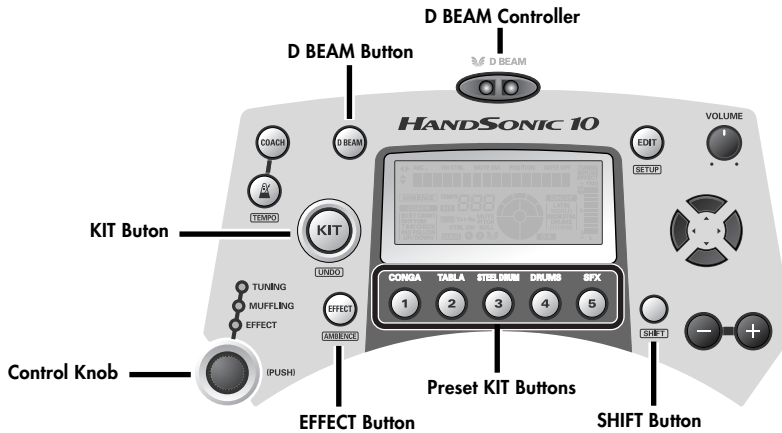
There is a way to call up the name of the sounds being played without using the EDIT function. While in Kit mode, press the [▶] cursor once. Then when you play any pad you can see the instrument name in the display.



Positional Sensing

Press the [CONGA] kit button (#1). Play the 2 larger pads starting near the center, and as you move towards the edge, play a bit harder, and you will hear what the positional sensing function does. Slap the edge. This works on specific sounds only. (More about that is explained later.)





D BEAM

Now pass your hand over the D Beam. Here you are simply triggering a sound with it. Make sure the [D BEAM] button is lit.

Ambience

Next, while holding down the [SHIFT] button, press the [EFFECT] button. This is how you turn the Ambience on or off, and you will see the indication in the display.

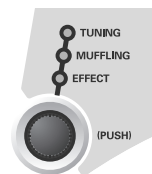
Effects

Press the [SFX] kit button (#5). Play the pads and D Beam. Press the [EFFECT] button to hear the difference.

Control Knob

- TUNING:** Press the [STEEL DRUM] kit button (#3). Now, push the Control Knob, LED next to TUNING will light. Tap any pad, and turn the control knob. This is a quick way to tune the sounds.
- MUFLING:** Press the Control Knob and the LED next to MUFLING will light. Tap any pad and turn the Control knob.
- EFFECT:** Press the Control knob and the LED next to EFFECT will light. Tap any pad and turn the Control knob. In this case, you are changing a parameter in the Effects assigned to this kit.

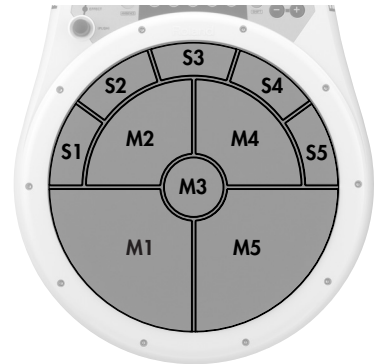
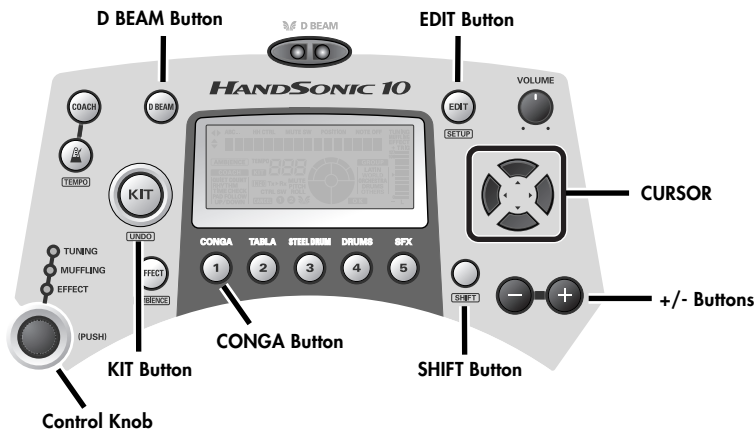
* If you make any of the above adjustments while in a User Kit (1–64), those changes will be written. You can undo them however. (see page 23)



Press the [KIT] button and try out some of the 64 user kits.

Basic Editing

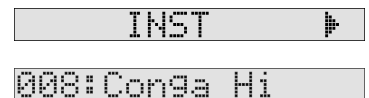
In order to understand the possibilities of the various editing functions, there are a few basic points you must take into consideration. These will help save you time, and avoid frustration whether this is your first electronic musical instrument or not. Any changes you make are automatically registered as there is no "write" function. Taking that into consideration, we recommend that you explore the editing process first by using one of the 5 preset kits shown here. The reason we suggest this is because these kits are pre-set. You can edit them temporarily, but once you change the kit, they automatically return to their factory settings.



Pad references used in this manual

Assigning a Sound to a Pad

1. Push the [CONGA] button.
2. Press [EDIT], and you will see <INST> in the display.
3. Press the [▶] cursor and here you will see the sound assigned to any pad you touch (or D Beam, optional external pad/foot switch).



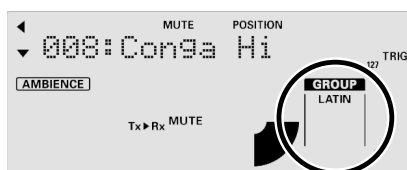
The D Beam button must be lit in order for it to function.

* Remember that during the EDIT mode, the [EDIT] button will blink. Also, the pad you are editing will be highlighted in the display.

4. Let's work with just one pad for the moment. Tap pad M5.

To change the sound you have a few choices:

- You can use the [+]/[-] buttons, or the Control knob.
- Or press [SHIFT], and while holding it down, press the [+]/[-] buttons. You can jump between instrument groups, as shown in the display. Try this once to see what happens, and watch the display to see the instrument group names change.



Tuning

1. Press [KIT]^(*1), then press [CONGA], then [EDIT] and you see <INST>. Press the [▶] cursor and you will see the instrument name.

*1: This is only to reset this kit to the factory settings and ONLY for this basic functions explanation.

2. Now press the [▼] once, you will see <Tuning> in the display.

Now you can use the [+]/[-] buttons or the Control knob to change the pitch.

Muffling

3. Push the [▼] again, and you will see <Muffling> in the display.

While tapping one of the pads, use the [+]/[-] buttons or the Control knob, and you will not only hear what is happening to the sound, but the Value meter on the right hand side of the display will indicate how much muffling is being applied, as well as the numerical values in the display.

If you want to apply the same amount of muffling to all sounds in the kit, while holding down the [SHIFT] button press the CONTROL knob.

The display shows <same for all>.

This function will work with all of the pad specific parameters.

Volume

4. Press the [▼] again and you will see:

This sets the level of the sound for each pad.

Pan

5. Press the [▼] again, and here you can adjust the position in the stereo field of the sound for each pad.

Exiting the Edit Mode

6. Press [EDIT], extinguishing its indicator.

PRESSURE

1. Press [KIT], then press [CONGA], then [EDIT], so you see <INST> in the display again.
2. Press the [▼] cursor once and you will see <PRESSURE> in the display.
3. Press the [▶], and you will see <Tx> (this means “transmit pressure control”).
4. Play the large left pad and you will see <ON> in the display.

PRESSURE ▶

5. Press the [▼] once again, and you will see <Rx Mute> (receive mute control) in the display.

Rx Mute ON

6. Play the right pad once. Now, place your left hand on the left pad, while playing the right pad. If you don't hear a difference in the sound of the right pad, press a little harder on the left pad.

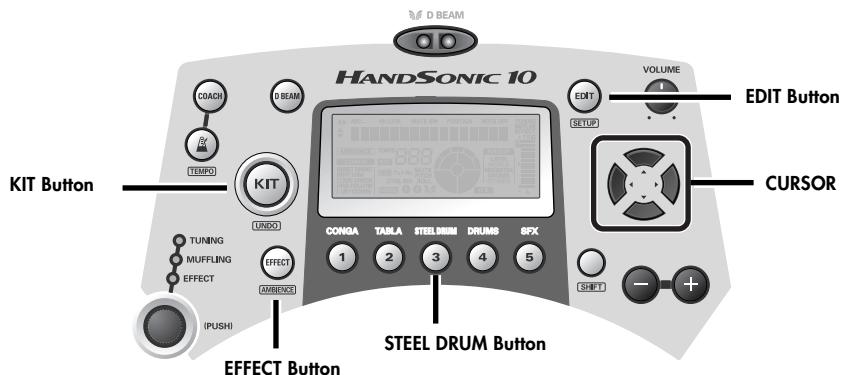
You will hear how the pressure placed on one pad can mute the sound of another, very useful when playing congas or bongos etc. This is an example of the “mute” function, and demonstrates pad interactivity and control. The [+]/[-] buttons or Control knob can be used for on/off switching.

7. Now play the right pad once, and use the [+]/[-] button or Control knob to turn “Rx Mute” to “OFF.”
8. Press the [▼] again and you will see <Rx Pitch> (receive pitch control) in the display.

Hit the right pad once, and use the [+]/[-] buttons or the Control knob change the pitch-change amount. Set this as you wish. Then while playing the right pad, place your left hand on the left pad, and apply pressure. Now you can hear how one pad can control the pitch of another with pressure.



EFFECTS (Basic)



1. Press [KIT], then press [STEEL DRUM], then [EDIT], so you see <INST> in the display again.
2. Press the [▼] cursor until you see <EFFECTS> in the display.
Verify that the [EFFECT] button is also lit.

EFFECTS ▶

3. Press the [▶] and you will see <Type> in the display.

Type CHORUS

Here is where you can change the effect being used. More about effects will be explained on page 21 and 30.

Short Cut Access to Effects Editing

While holding down the [EDIT] button, press [EFFECT].

Naming a Kit

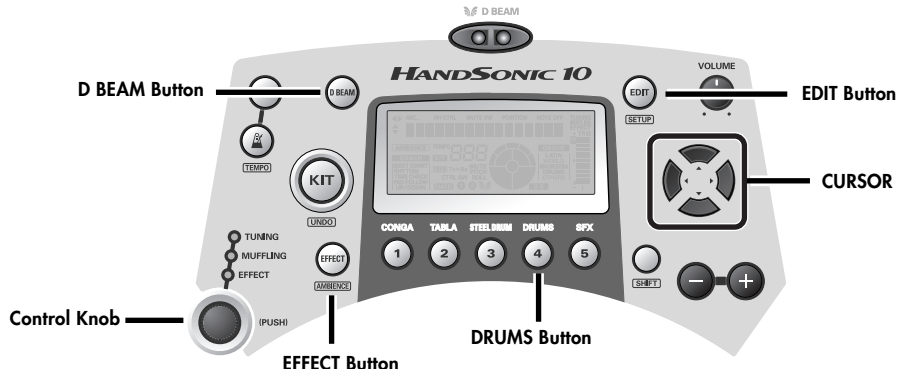
1. Press [KIT], then press [STEEL DRUM], then [EDIT] so you see <INST> in the display again.
2. Press the [▼] cursor until you see <KIT/MIDI> in the display.
3. Press the [▶], and you will see <Kit Volume>.
4. Press the [▼] again and you will see:
5. Use the [+]/[-] buttons or Control knob to change the name as you desire.
Use the [▶] or [◀] to move between the letters.

KIT/MIDI ▶

Name[SteelDrum]

D BEAM

The D Beam functions not only for triggering sounds, but for controlling them as well. During this explanation, make sure the [EFFECT] button is NOT lit. (OFF)



1. As an example, push the [DRUMS] button.
2. Make sure the [D BEAM] button is lit, and pass your hand over the D Beam.

In this case the D Beam is just triggering the sound assigned there.

3. Next, push the [EDIT] button, and press the [▼] cursor once.

You see <PRESSURE> in the screen.

4. Push the [▶], and in the display you see <Tx> (transmit) and <OFF>. Use the [+] button to turn it "ON."

Tx ON

5. Now push the [▼] twice and you will see <Rx Pitch> in the display.

Rx Pitch 0

Here you can adjust the pitch bending range you will control with the D Beam.

Use the [+]/[-] buttons or the Control knob, and set it to -1200.

When using the [+]/[-] buttons for data entry, by holding down [SHIFT] and then pressing either of the buttons, the increments/decrements move much quicker.

Or just turn the Control knob quickly to the left, to get to the -1200 position.

6. Now pass your hand over the D Beam quickly and at close range, and you will hear the sound bend.
7. Then move your hand over the D Beam, and once the sound is heard, move your hand up and down, to hear how you are controlling the sound.
8. Try this:

While you can still see <Rx Pitch> -1200 in the display, tap once the large pad on the left and set this also to -1200. Now, while tapping the pad with your left hand, place your right hand above the D Beam, and then slowly lower your hand. Here you can see how the D Beam can control the pitch of sounds assigned to other pads.

* Remember, the D Beam is sensitive to the light in the space where you are playing it. See p. 25 for adjustments to the D Beam.



*Actual infrared beam is invisible.

METRONOME (STYLE GUIDE)

STYLE GUIDE Metronome patterns include 86 variations and are not only fun to play along with, but can help you learn different rhythms and styles.

(All adjustments to settings can be made with the [+]/[-] buttons or the Control Knob.)



1. Press the [] button to start.
2. While holding down the [SHIFT] button, press [EDIT] and you will see <METRONOME> in the display.

METRONOME

3. Press the [] cursor you will see:

Type STYLE GUIDE

There are two choices here, NORMAL and STYLE GUIDE. NORMAL will be explained further on, so keep the setting at STYLE GUIDE.

* *IMPORTANT: When the TYPE is set to STYLE GUIDE, all uses of the metronome will use the currently selected pattern, even when using the COACH function (except for RHYTHM CHECK and PAD FOLLOW). See page 17.*

4. Press the [] and you will see the current pattern in the display.

01: Samba

Use the [+]/[-] buttons or the Control knob to make a selection.

Tempo

5. Press the [] once, and here you can set the TEMPO. (Range = 40–200 BPM)

Tempo 90

Volume

6. Press the [] again, and you'll see:

Volume 7

The volume range is 0–10.

Tempo Change

7. Press the [▼] until you see:

TempoChange AUTO


Style Guide patterns have their own tempo settings.

If Tempo Change is set to OFF, then those tempos will be ignored, and all Style Guide patterns will play at the Metronome's tempo setting.

If Tempo Change is set to AUTO, then, in general, each time you change a pattern the tempo will change as well.

* Depending on the pattern chosen and the kit you are playing, you may notice sounds drop out, or mute.

METRONOME (NORMAL)

1. Press the [] button to start.
2. While holding down the [SHIFT] button, press [EDIT] and you will see <METRONOME> in the display.
3. Press the [▶] cursor and you will see <Type> in the display. Change this to NORMAL.

METRONOME ▶

Type NORMAL

Tempo

4. Press the [▼] once, and here you can set the TEMPO.
(Range = 40–200 BPM)

Tempo 90

Beat (Time Signature)

5. Press the [▼] again, and here you see <Beat> in the display.

Beat 4

The possibilities are from 0 beats to 9 beats per measure.

Rhythm

6. Press the [▼] again, and here you see <Rhythm> in the display.

Rhythm ↓

The choices include ♩ (whole notes), ♪ (half notes), ♪ (quarter notes), ♪₃ (quarter-note triplets), ♪ (eighth notes), ♪₃ (eighth-note triplets) and ♪ (sixteenth notes).

Should you need to practice in tempos higher than 200 BPM, changing the Rhythm to eighth-notes and the Beat to 0 can be helpful.

Metronome Sound

7. Press the [▼] again, and you'll see:

Sound ELECTRONIC

You have 12 different types of sounds to use as a metronome sound.

Metronome Sound List

No.	Sound
01:	ELECTRONIC
02:	OLD STYLE
03:	PULSE
04:	BEEP
05:	SWEEP
06:	ZAPP

No.	Sound
07:	STICKS
08:	COWBELL
09:	CLAVES
10:	WOODBLOCK
11:	TRIANGLE
12:	SHAKER

Volume

8. Press the [▼] again, and you'll see:

Volume 7

The volume range is 0–10. (Some of the metronome sounds are rich in high frequencies, so please be careful with this level setting, especially if you are using headphones.)

Short Cut Access

Metronome Parameters

While holding down the [EDIT] button, press the [] button.

If the TYPE selected is STYLE GUIDE, then this will immediately take you to the STYLE GUIDE pattern select page.

If the TYPE is NORMAL, then this will take you to the TYPE select page.

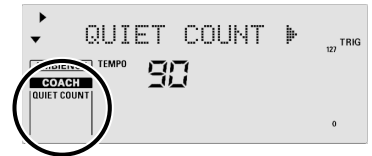
Metronome Tempo

While holding down the [SHIFT] button, press the [] button.

COACH MODE



Here you will find 6 different functions, all designed to challenge and help you improve your timing, rhythmical sense, stamina and make you more comfortable with the pad positions. When entering this mode, you will also see which function you are using appear in the left side of the display. We advise to check each function as explained here first, before make any adjustments to the factory settings. This way you will have a good grasp of the possibilities.



Quiet Count

1. Press the [COACH] button and you see <QUIET COUNT> in the display.
2. Press the [BY] button now to see what it does.
3. Press it again to stop.
4. Press the [▶] cursor and you see:
5. Press the [▼], and here you will see:

QUIET COUNT ▶

Measures 4

Quiet 1

This means that in a four measure pattern, there will be a one measure break on the 4th measure.

If you set "QUIET" to "2" then it means the last two measures are the break.

Depending on your metronome setting for TYPE, you can use this function with the NORMAL metronome function or with the STYLE GUIDE.

Setting Possibilities:

Measures	From 2 to 16 measures.
Quiet	From RANDOM and 0.5 to 4 measures.

Depending on the amount of MEASURES chosen, the QUIET possibilities will differ. RANDOM means the COACH will change the break lengths in a random way.

6. If you push the [▼] one more time, you can set the tempo.

Rhythm Check

* This function uses the sound assigned to the large right pad (M5) in the current kit. Be sure there is a sound assigned there or that the volume of that sound is not too low.

1. Press the [COACH] button and use the [▲] or [▼] cursors until you see <RHYTHM CHECK> in the display.

RHYTHM CHECK ▶

2. Press the [FX] button now to see what it does.

Within the 2 measure count in, you will see <Listen> appear and then <Play>.

1: Listen -1-1

The idea here is to simply copy the rhythm you hear.

When you play/copy the rhythm correctly, <Good> will appear and the Coach will advance to another pattern.

If you make a mistake, you will see <Again> in the display until you get it right.

It does not make any difference which pad you play during this exercise.

So if you have optional foot switches or kick triggers connected, you can use them for training your foot timing as well.

3. Press the [FX] button again to stop.

4. Press the [▶] and you see:

Grade LEVEL1

There are 5 Grade levels. 1 is the simplest, and 5 is the most difficult.

5. Press the [▼] again and you will see:

Indicator OFF

6. Push the [▼] until you see <Tempo>. Adjust as needed.

7. Push the [▼] until you see <Beat>. Adjust as needed.

8. Push the [▼] until you see <Metronome Vol>. Adjust as needed.

Time Check

1. Press the [COACH] button and use the [▲] or [▼] cursors until you see <TIME CHECK> in the display.

TIME CHECK ▶

2. Press the [FX] button, watch the display and start playing in time with the metronome.

S ← ● — + — — — → F 1-2

You will see a little dark ball indicating exactly where you are playing in reference to the tempo. When you play ON the beat the little dark ball appears in the center over the + indicator.

"S" at the left side of the bar graph means you are slow, or behind the beat, and "F" on the right side means you are fast, or ahead of the beat.

3. Press the [FX] button again to stop.

4. Press the [▶] and you see:

Grade EASY

There are 2 Grades: EASY & HARD.

5. If you push the [▼] one more time, you can set the tempo.

Pad Follow

Designed to help you become more familiar with the positions of the pads, it provides some challenging variations. Remember this does NOT check your timing, but only your ability to know what sounds are on which pads (or external triggers).

* This function uses all sounds assigned to all pads (and external triggers, if you have selected Ext Trig ON). Be sure there is a sound assigned there or that the volume of that sound is not too low.

1. Press the [COACH] button and use the [▲] or [▼] cursors until you see <PAD FOLLOW> in the display.

PAD FOLLOW ▶

2. Press the [$\frac{1}{2}$] button and within the 2 measure count in, you will see <Listen> appear and then <Play>.

1: Listen -1-1

The display indicator will show you which pad has been played, and you just have to play the same one, before the Coach advances to the next variation.

3. Press the [$\frac{1}{2}$] button again to stop.

This function operates in a similar way to the Rhythm Check function.

4. Press the [▶] and you see:

Grade LEVEL1

There are 5 Grade levels. Level 1 is the easiest, and Level 5 is the most difficult.

5. Press the [▼] again and you will see:

Indicator ON

If you turn it OFF, then this will help you memorize which sounds are where.

6. Press the [▼] again and you will see:

Ext Trig OFF

If you are using optional external foot switches or triggers, then turn this to ON and it/they will be included in the PAD FOLLOW exercise.

7. If you push the [▼] one more time, you can set the Tempo.
8. Push the [▼] again and you'll see <Beat>. Adjust as needed.
9. Push the [▼] again and you'll see <Metronome Vol>. Adjust as needed.

Auto Up/Down

1. Press the [COACH] button and use the [▲] or [▼] cursors until you see <AUTO UP/DOWN> in the display.



2. Press the [A/X] button and watch the display.



You will see the tempo indicator increase 1 BPM every two beats.

3. Press the [A/X] button again to stop.

4. Press the [▶] and you see:



If you set the RATE to 1, the tempo will increase 1 BPM every measure, and if you set the RATE to 3, the tempo will increase 1 BPM on every beat.

While the metronome is playing, you'll also notice in the left side of the display, 90→200.

This is showing you the MINIMUM TEMPO and MAXIMUM TEMPO. This means that the metronome will start playing at 90 BPM, increase to 200 BPM, and then go back down to 90 BPM.

You can adjust this by pressing the [▼] once, where you will see <Min Tempo> in the display. Use the [+]/[-] buttons or the Control knob to set your desired tempo. Push the [▼] once more and you see <Max Tempo>.

Also, while the metronome is playing, you can set the Max Tempo by pushing the [-], and you will see <set max tempo> in the display. If you push the [+], you will see <reset max tempo> and it will be reset to 200 BPM.

Tap Tempo

1. Press the [COACH] button and use the [▼] cursor until you see <TAP TEMPO>.



Here, you can tap any pad, or external trigger to set the Tempo.

This is useful as a training exercise, because as you tap the pads, you can see the tempo indicated in the display. Very good for tempo training.

You can adjust the tempo(min tempo) when any of the coach mode functions appears in the display, or while the metronome is running with the Control knob or using the [+]/[-] buttons. (except for Auto Up/Down)

Advanced Edit

ROLL

1. Select any kit.
2. Press [EDIT], and then the [▼], until you see <PRESSURE>.



3. Press the [▶] once and then the [▼] again until you see:



If this is set to OFF, raise the value.

The roll speed range is 1–30 beats per second OR

♪ (eighth notes), ♪₃ (eighth-note triplets),

♪ (sixteenth notes), ♪₃ (sixteenth-note triplets),

and ♪ (thirty-second notes), who's speed will be

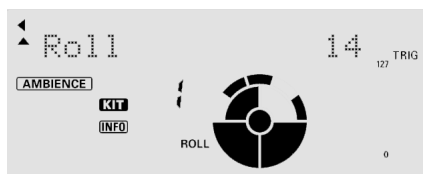
determined by the metronome's current tempo setting. Set the value as you wish.

If you want all the pads to roll, while holding down [SHIFT], push down the Control Knob.

4. Press any pad, or place your hand over the D Beam. The sound will roll.

Each pad, including the D Beam can use this function.

Another way to assign the Roll function to a pad is to press the [SHIFT] button, and tap the respective pad. Also, if you just hold down the [SHIFT] button, the display will show you which pads have the roll function active.



- * When using the Roll function set to high speeds, and depending on the sounds you are "rolling," sometimes noise may occur.

EFFECTS

1. Verify that the [EFFECT] button is lit.
2. Press [EDIT], and then the [▼], until you see <EFFECTS>.
3. Press the [▶] and you see the EFFECT TYPE.
4. Press the [▼] until you see the status of Pad Sw.
Each pad has its own individual EFFECT on/off switch. Set this as you wish.
If you just hold down the [SHIFT] button, the display will show you which pads are using EFFECTS or not.
→ If you want to assign effects to all pads, turn one pad to the "ON" position, then while holding [SHIFT], push the Control Knob down once. Or press [SHIFT] and tap a selected pad.
5. Pushing the [▼] again will take you to the various parameters of the EFFECT selected.

You will see <D Beam> and then <Knob>. As they both can control different parameters of the effect currently in use, use the [+]/[-] buttons or Control Knob to see what is possible. For an overall idea please refer to the EFFECT chart for more details. (p. 30)

- * After you have selected an effects parameter to manipulate with the Control Knob, while you are still in the Edit mode, you can test the function. Press the Control Knob, (the LED will light) and then turn it while playing a pad. You will see changes in numerical values and the bar graph in the display. If you decide to assign a different effect parameter to the knob, first use it to return the values to where they were, or execute the UNDO function.

Short Cut Access to Effects Editing

While pressing the [EDIT] button, press [EFFECT] button.

KIT Parameters

KIT Volume

1. Press [EDIT], and then the [▼], until you see <KIT/MIDI>.

2. Press the [▶] and you see the Kit Volume.

MIDI

Note#

3. Press the [▼] until you see:

* The MIDI Note # for each pad can be changed, and the HandSonic will remember these on a "per kit" basis. You would only need to do this when triggering an external sound module. An "*" will appear to the right of the note number if two pads use the same note number within the same kit. Please be careful, because if identical MIDI messages are received from an external sequencer or MIDI controller, the HandSonic will not sound as you expect.

* If recording a performance on an external sequencer, and using a Foot Switch for Hi-hat control, the HandSonic will transmit a note number 4 steps lower than the one assigned to the pad being played. (ONLY if this pad has a sound capable of Hi-hat control.) This will occur only while the foot switch is pressed and the pad is played.

Gate Time

All Pads	GATE, ALT, 0.1–8 seconds.
D Beam	SCRAPE, GATE, ALT, 0.1–8 seconds.
External Trigger/ Foot Switch	ALT, 0.1–8 seconds.

ALT & GATE refer how "note on/note off" is handled. Only certain sounds respond to these functions, the indications appear above the instrument name in the display or you can see this in the instrument list on page 34.

For an example, go to KIT #18 "Pot Drum".

1. Press [EDIT], then the [▶] and play the large pad on the right.

You will see <NOTE OFF> appear above the instrument name.



2. Press and hold the pad for a few seconds, then release your hand.

This is how GATE functions.

3. Press the [◀] once and then [▼] until you see <KIT/MIDI>.

Press the [▶] and then the [▼] until you see <Gate Time>.

4. Play the same pad, and change the Gate Time parameter to "ALT."

5. Now tap the pad once, and then again.

You will hear how ALT works.

SCRAPE works only with the D Beam and literally allows you to scrape a sound with your hand movement.

TOOLS

* If you have selected a preset kit, the only functions available here are *KIT COPY* and *L-R EXCHANGE*.

1. To access the **TOOLS**, press [EDIT] and then the [▼] until you see:



2. Press the [▶] and you see <KIT COPY>, and the [▼] for selecting the functions as explained below.

KIT COPY

From the **KIT COPY** page press the [▶] to select the source (Src in the display) and then press the [▼] to select the destination (Dst in the display).

To execute, press the [▼] again, and a confirmation message will appear in the display. Press the [4] (OK) button if OK, and the [2] (CANCEL) button to cancel the operation.

Restoring an Individual Kit to the Factory Settings

KIT COPY can also be used to restore the selected kit to the original factory settings. When selecting the "source" as mentioned above, scroll to where you see a <P: > before the kit name.

KIT EXCHANGE

This is a useful function for re-arranging the order of your kits. Follow the same procedure as explained in **KIT COPY**.

KIT CLEAR

This function completely clears all parameters assigned to all pads.

PAD COPY

This allows you to copy all parameters of one pad to another. Follow the same procedure as explained in **KIT COPY**. In this case you can select your source and destination pads by simply tapping the pad or external trigger/foot switch. (MIDI Note# will not be copied)

PAD EXCHANGE

Here you can swap the parameters between two pads. Follow the same procedure as explained in **KIT COPY**.

PAD COPY/EXCHANGE (between different kits)

You can also copy or exchange pad parameters between two different kits. To do that, follow the same instructions for copy or exchange, but in this case you need to press the [SHIFT] button, and use the [+]/[-] buttons when choosing the source or destination kit. Upon pressing [SHIFT], you will see the **KIT NAME** appear in the display, and you can listen to the sound assigned to the pad in the destination (Dst) or source (Src) kit.

PAD CLEAR

This function completely clears all parameters assigned to one pad. Follow the same procedure as explained in **KIT COPY**.

L-R EXCHANGE

Perfect for exchanging all pad parameters, especially if you are Left Handed. Follow the same procedure as explained in **KIT COPY**. When you select this function, the display highlights the pads that will be exchanged. All pad parameters will be exchanged except for the M3 pad and the S3 pad.

UNDO

The undo function allows you restore the Kit to the state it was in BEFORE you made changes to any parameter. However, if you make changes to a kit, and then change kits, your modifications will be permanent. If you want to UNDO any changes made, do so before going to another kit. While holding down [SHIFT], press the [KIT] button, and follow the commands in the display.

* When executing the **UNDO** function, you can preview or compare the newly edited kit with the kit as it was before you made changes.



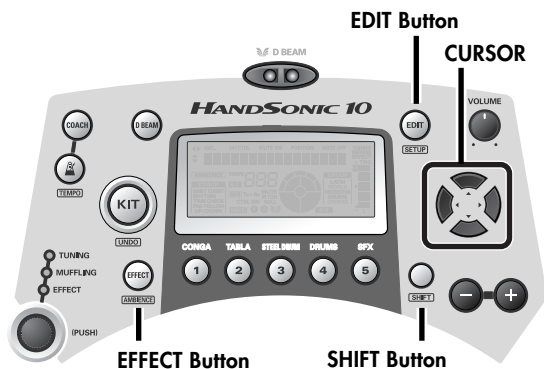
When this screen appears, you can play the pads, and you will hear the previous version.

Setup

METRONOME

Refer to page 14.

AMBIENCE



1. While holding down the [SHIFT] button, press [EDIT].
2. Use the [▼] until you see <AMBIENCE>.

AMBIENCE ▶

3. Press the [▶] once, and you'll see:

Switch ON

You can also turn the AMBIENCE on and off, while holding down the [SHIFT] button, and pressing the [EFFECT] button. You will see the relative indication in the display.

4. Press the [▼] once, and you'll see:

Type ROOM 1

Here you can select from 5 different types of AMBIENCE. The choices are:

STUDIO, ROOM 1, ROOM 2, THEATER, CHURCH

5. Press the [▼] again, and you'll see:

Level 40

This is where you adjust the overall level of the AMBIENCE. Remember that this is a global parameter, meaning that when AMBIENCE is on, all sounds will be included.

SYSTEM

LCD Contrast

1. While holding down the [SHIFT] button, press [EDIT].
2. Use the [▼] until you see <SYSTEM> in the display.

SYSTEM ▶

3. Press the [▶], and here you see:

LCD Contrast 5

Range: 1–10.

Depending on the lighting of where you are playing you may need to adjust this.

Short Cut for Changing the Contrast

Press and hold down the [KIT] button, and use the [+]/[-] buttons.

Inst Sort (Instrument Selection Choices)

4. Press the [▼] again, and you'll see:

Inst Sort GROUP

There are two choices.

GROUP means that the instruments are arranged in 5 Groups. (LATIN, WORLD, ORCHESTRA, DRUMS, OTHERS)

ABC means the instruments are arranged in alphabetical order.

Pad Chase

5. Press the [▼] again, and you'll see:

Pad Chase ON

If you turn this OFF, then when editing sounds, playing the pads will NOT call up the triggered sound to the display, requiring you to use just the combination of [SHIFT] and the [◀] or [▶] to change the sound being edited.

D BEAM

1. While holding down the [SHIFT] button, press [EDIT].
2. Use the [▼] until you see <D BEAM>.
3. Press the [▶], and you'll see:

Sens 5

Range: 1–10

This needs to be adjusted, if for example, the D Beam switch is on, you are not playing the instrument, but you notice the Value Meter is moving or NOT in the zero position.

Bring the sensitivity down until it stops moving.

If the response is not as you wish, raise the sensitivity.

4. Press the [▼] again, and you'll see:

Curve TYPE1

This needs to be adjusted if you feel there is not a good linear, or smooth response when pitch bending, or controlling effects. Raise and lower your hand over the D Beam, and watch the Value Meter.

If the meter moves suddenly at any point, change the Curve Type.

Pad Settings (PAD)

Playing Style (Hands or Fingers)

1. While holding down the [SHIFT] button, press [EDIT].
2. Use the [▼] until you see <PAD>.
3. Press the [▶], and here you'll see:

PlayStyle HAND

You can choose between HAND or FINGER, obviously referring to your playing preference.

Sensitivity

4. Press the [▼], and you'll see:

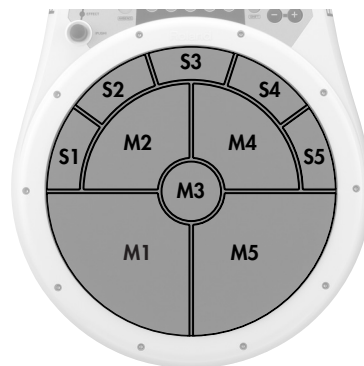
Sens 5

Range: 1–10

The 5 Main pads (M1–M5), have their own individual Sensitivity.

The 5 Sub pads (S1–S5) share the same Sensitivity.

Tap the respective pad in order to adjust as you wish.



Curve

5. Press the [▼] and you'll see:

Curve LINEAR

Choices are:

LINEAR, EXP1, EXP2, LOG1, LOG2, SPLINE, LOUD1, LOUD2 (See Glossary. p. 38)

Pressure Sens

6. Press the [▼] and you'll see:

Pressure Sens 5

Range: 1–10

Position

7. Press the [▼] and you'll see:

Position 0

Range: OFF, -3–+3

Position (M1 & M5 pads only)

- * Adjusting this parameter will affect the way the M1 and M5 pads respond depending where you play them, provided the sound assigned is positional sensing capable. (see inst list on p. 34) A good way to understand how this function works, is to use the pre-set CONGA kit. Play the M1 or M5 pads, moving from the center to the edge, while at the same time, changing the Position value. To be more specific, if you set this to +3 you will notice that the "edge" sound will be very easy to produce, even when playing in the middle of the pad. Adjust according to your playing style.

External Trigger Settings (EXT TRIG)

1. While holding down the [SHIFT] button, press [EDIT].
2. Press the [▼] until you see <EXT TRIG> (external trigger).
3. Press the [▶], and you'll see:

Mode FOOT/PAD x2

Foot/Pad x2: For using 2 foot switches, 2 pads or a combination of Foot switch and a pad or kick trigger.

Pad (Rim): When using a head/rim capable pad.

Foot Switch

4. Press the [▼] and when you see this screen, use the [+]/[-] button and select "FOOTSW."

Type FOOTSW

Optional foot switches can be used for triggering sounds and for performing various other functions.

You can use either a single foot switch, (DP-2 etc.) or 2 FS-5Us (Boss) which will need to be connected with an optional PCS-31L cable (insert cable). When using 2 foot switches, each one can have its own individual functions, in addition of course, to also triggering sounds. Assigning sounds to the foot switches works exactly like assigning a sound to one of the on-board pads, as explained on page 9.

When you step on a foot switch, you will see its relative number (1 or 2) appear at the bottom of the display.

5. Press the [▼] and you will see:

Polarity +

Depending on the foot switch you are using, you may need to change this parameter. For example, if when you step on the switch, and you only hear the sound when you take your foot off, then you should change the polarity. Some foot switches (ex:FS-5U) have polarity switching possibilities.

6. Press the [▼] and you will see:

Velocity 100

Range: 1-127

As a foot switch can not respond to playing dynamics, this is an important setting.

7. Press the [▼] and you will see:

Ctrl OFF

Foot Switch Functions

OFF

HH CTRL:

This allows you to close the open Hi-hat sound (see the instrument list to know which sounds allow this).

- #329: AcuHH
- #334: AcuHH 2
- #339: ClubHH
- #343: ClubHH2
- #347: 808 HH
- #351: 909 HH

<HH CTRL> will appear above the instrument name in the display.

KIT+, KIT-:

This allows you to change kits: one step up, or one step down.

START/STOP:

This lets you start or stop the metronome.

EFFECT SW:

This turns the effects on or off.

D BEAM SW:

This turns the D Beam on or off.

ROLL SW:

When activating this function, it means that if the ROLL function is ON for a specific pad, it will only roll while the foot switch is pressed.

Other Triggers

After you have executed steps 1-3 (left column of this page).

4. From the Type screen use the [+]/[-] buttons and select the type of pad you are using.

Type PDX8

Display	Pad Compatibility
KD7/8	KD-7, KD-8
KD85/120	KD-80, KD-85, KD-120
PD8	PD-7, PD-8, PD-9
PDX8	PDX-8
PD85/125	PD-80, PD-80R, PD-85, PD-100, PD-105, PD-120, PD-125
CY5/8	CY-5, CY-8
CY12/14	CY-12R/C, CY-14C, CY-15R

5. Continuing to press the [▼] will give you access to the following parameters.

Normally you do not have to adjust them, as the settings are automatically changed depending on your choice of pads (listed previously).

Display	Range/Choices
Sens (Sensitivity)	1-16
Threshold	0-15
Curve	LINEAR, EXP1, EXP2, LOG1, LOG2, SPLINE, LOUD1, LOUD2
Scan Time	0-4
Retrig Cancel	1-16
Mask Time	0-64
XTalk Cancel	OFF, 20-80
Rim Sens	OFF, 1-20
Rim Gain	0.5-2.0

For detailed explanations of the above trigger parameters, please see Glossary (p. 38).

MIDI

1. While holding down the [SHIFT] button, press [EDIT]. Press the [▼] until you see <MIDI>.

Changes to any of the following parameters are only needed if you are using the HandSonic to control an external sound module or in exceptional situations.

2. Press the [▶], and here you see:

MIDI Channel 10

3. Press the [▼] to access the following parameters.

Local Control

LocalControl ON

Turn this off when recording your HandSonic performance on an external sequencer, as long as you are also receiving the MIDI signal FROM that sequencer.

PC Tx/Rx

PC Tx/Rx ON

This allows the HandSonic to transmit & receive "Program Change" information.

CC Tx/Rx

CC Tx/Rx ON

Determines if you want to send or receive control changes. (like pressure information etc..)

Pressure Control Change Number

PressureCC# PAF

(For details on PAF, see Glossary →p. 38)

D BEAM Control Change Number

D Beam CC# 81

Knob Control Change Number

Knob CC# OFF

* Control change information is ONLY transmitted from the knob when it is in the EFFECT position (LED is lit). Use this when you want to control an external MIDI module. If the HandSonic receives this information via MIDI, nothing will happen.

Device ID

Device ID 17

BULK DUMP

1. While holding down the [SHIFT] button, press [EDIT]. Press the [▼] until you see <BULK DUMP>.

Used for saving the HandSonic settings to an external sequencer.

Press the [▶], then use the [+] / [-] button to select the type.

Choices are: 1 KIT, ALL KITS, ALL

To execute, press the [▼] again, and a confirmation message will appear in the display. Press the [4](ok) button if OK, and the [2](cancel) button to cancel the operation.

* Saving/Re-Loading individual kits example: If you save Kit #1, and then later want to re-load it, select the destination for that kit BEFORE loading. It will not automatically be loaded into the Kit #1 position.

FACTORY RESET

1. While holding down the [SHIFT] button, press [EDIT]. Press the [▼] until you see <FACTORY RESET>.

Press the [▶], then use the [+] / [-] button to select the type.

The choices here are **SETUP, ALL KITS, ALL**

To execute, press the [▼] again, and a confirmation message will appear in the display. Press the [4](ok) button if OK, and the [2](cancel) button to cancel the operation.

* This resets all parameters to the original factory version. You can not use Undo after executing this function. Make sure you save your settings first. (Bulk Dump)

Short Cuts


EFFECT

While pressing the [EDIT] button, press [EFFECT] button to access to Effects editing.

D BEAM

While holding down the [EDIT] button, press [D BEAM] button to access to D Beam setup parameters.

METRONOME

While holding down the [EDIT] button, press [] button to access to Metronome parameters.

“ALL” Function

While in EDIT mode, you can hold down the [SHIFT] button and press the Control Knob to execute the “all” function, allowing you to quickly set the same value to all pads. This works with all pad specific parameters.

Editing Without Hitting a Pad

After pressing the [EDIT] button, you can select the pad by holding down [SHIFT] and pressing either the [▶] or [◀].

LCD Contrast Adjust

Press and hold down the [KIT] button, and use the [+]/[-] buttons.

Quick Increment/Decrement changes

While holding [SHIFT] and pressing the [+] or [-] buttons, you can increase or decrease the selected parameter value, or kit choice rapidly.

Also while holding the [-] button down and pressing the [+] button, you can decrease the value quickly.

Also while holding the [+] button down and pressing the [-] button, you can increase the value quickly.

Kit Naming

Hold down [SHIFT] and press the [▶] to insert a space.

Hold down [SHIFT] and press the [◀] to delete a character.

Hold down [SHIFT] and press the [+] or [-] buttons to scroll through the character set (letters, numbers, symbols, space).

Press the Control Knob to change a character from small letters to capital letters.

Favorite Kit Jump Function

Using the Preset Kit buttons as a “jump function” to your favorite kits.

Write

1. First, select the kit.
2. Then, while holding down the [SHIFT] button, press any one of the 5 Preset Kit buttons, and hold them both down until the following message appears. “registered!”

Recall

To call up that kit, just press [SHIFT], and then the button you have registered a favorite kit to.

Error Messages/Troubleshooting

This section lists the messages (error messages) that the HandSonic 10 produces and explains the meaning of each message, giving you to appropriate action to take.

MESSAGE	MEANING	WHAT TO DO
midi offline!	MIDI Cable was disconnected, or communication with external MIDI device was interrupted.	Check MIDI connections/cables.
midi buf full!	Too much MIDI information was received at once and could not be processed correctly.	Verify connections, and the type of MIDI information you are sending.
midi rx error!	The HandSonic 10 did not receive a MIDI message correctly.	Re-transmit the message again.
bulk rx error!	The HandSonic 10 did not receive BULK MIDI data correctly.	Re-transmit the message again. If the problem continues, there's a problem with the data being transmitted to the HandSonic 10.
bulk checksum!	Checksum value of a System Exclusive message was not correct.	Correct the checksum value.
battery low!	The internal battery, used for maintaining data in the user memory, has become weak.	Contact your dealer, or Roland service to have it replaced.

Troubleshooting

Before contacting a local Roland service center, be sure you have read this manual in its entirety.

1. NO SOUND?

Double check all audio connections, volume controls on the HandSonic 10 or external amplifier.

2. OVERALL SOUND OF A KIT HAS CHANGED?

Did you use the Control Knob to modify Tuning, Muffling or Effects? If you did, and you changed kits without executing UNDO, then you have re-written various parameters in that kit.

For info on the Control Knob functions, see page 8. For info on UNDO, see page 23. For info on recalling any KIT's original factory settings, see page 27.

3. THE [EFFECT] BUTTON IS OFF, BUT YOU STILL HEAR REVERB?

Look at the display to see if AMBIENCE is still ON. To turn it off, while holding [SHIFT], press the [EFFECT] button. (AMBIENCE-page 24)

4. FOOT SWITCH SEEMS TO WORK BACKWARDS?

When using foot switches, if you hear the sound when you release your foot from it, this means you need to switch the POLARITY, or you have not set the correct TYPE of external trigger. See page 26.

5. STYLE GUIDE METRONOME - TEMPO PROBLEMS?

- You have set the tempo of the metronome, but the pattern plays at a different tempo?
- All the patterns play back at the same speed.
Remember there is a Tempo Change parameter that

determines if the patterns play back at their own individual, pre-set tempos, or at the tempo set by the Metronome itself. See page 15.

6. PLAYING WITH THE STYLE GUIDE METRONOME.

Depending on the pattern chosen and the kit you are playing, you may notice sounds drop out, or mute.

7. WHEN CHANGING FROM ONE KIT TO ANOTHER, YOU HEAR A SOUND?

Depending on the EFFECT assigned to a specific kit, and the length or decay, of the last sound played, this may occur. If you play a cymbal sound, and then change the kit while you can still hear that sound, then the effects assigned to the new kit will be applied to that last sound.

8. TEMPO DELAY

Because of the way the Tempo Delay operates, at low tempos, depending on the BEAT selection, it may not work as you expect.

Also, the Tempo Delay will not follow correctly if you are using the Auto Up/Down function in COACH mode.

9. COACH MODE- RHYTHM CHECK AND PAD FOLLOW

If you set the BEAT to "0" or "1" the HandSonic will play in 4.

10. ROLL

When using the Roll function set to high speeds, and depending on the sounds you are "rolling," sometimes noise may occur.

Effects List

3Band EQ

Standard 3 Band Equalizer

Parameter	Value	Comments/ Descriptions
LowGain	-12.0dB – +12.0dB	Low Frequency Level adjustment
MidFreq	50Hz – 12.5kHz (1/3oct step)	Mid Frequency adjustment
MidGain	-12.0dB – +12.0dB	Mid Frequency Level adjustment
HighGain	-12.0dB – +12.0dB	High Frequency Level adjustment
TotalLvl	-12.0dB – +12.0dB	EQ's overall level adjustment
Dbeam (control possibilities)	OFF, TRANS, INVERT	
Knob (control possibilities)	OFF, HGAIN, MGAIN, LGAIN	

Filter

Cuts high or low frequencies. Drive modulates the cut-off frequency.

Parameter	Value	Comments/ Descriptions
FilterType	LPF, HPF	Low Pass Filter, High Pass Filter
Cutoff	0 – 100	
Resonance	0 – 100	
Rate	0 – 100	
Depth	0 – 100	
Drive	0 – 100	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, ZAP, COLOR, MODULAT, DRIVE, MIX	ZAP = cutoff+filtertype, COLOR = cutoff+reso, MODULAT = rate+depth, MIX = Dry/Effect balance
Knob (control possibilities)	OFF, CUTOFF, COLOR, MODULAT, DRIVE, MIX	

Compressor

Attenuates high-level sounds, & boosts low-level sounds, compressing the overall variation in volume level.

Parameter	Value	Comments/ Descriptions
Mode	AUTO, MANUAL	
Sens	0 – 100	Sensitivity of the compressor
Threshold	-60 – +6dB	
Ratio	1.0, 1.2, 1.5, 2.0, 2.8, 4.0, 8.0, 16.0, INF:1	
Attack	0.25 – 100ms	Attack start point
Release	50ms – 2.0s	Release point of compressed sound
Gain	-6.0 – +18.0dB	
Dbeam (control possibilities)	OFF, SENS	SENS = Sens+Threthold+ Ratio+Gain (Only Mode = MANUAL)
Knob (control possibilities)	OFF, SENS	

Enhancer

An Enhancer can sharpen the sound.

Parameter	Value	Comments/ Descriptions
Sens	0 – 100	
Level	0 – 100	
EQ Low	-12.0 – +12.0dB	Boosts low frequencies
EQ High	-12.0 – +12.0dB	Boosts high frequencies
Dbeam (control possibilities)	OFF, PRESENCE, LOWCUT	PRESENCE = Sens+Level+EQ High, LOWCUT= Presence+EQ Low
Knob (control possibilities)	OFF, PRESENCE, LOWCUT	

Delay


Standard Delay Unit

Parameter	Value	Comments/ Descriptions
DelayTime	0.8 – 270ms	
Feedback	-98 – +98%	
LF Damp	THRU, 50 – 4000Hz	
HF Damp	200Hz – 12.5kHz, THRU	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound

Parameter	Value	Comments/ Descriptions
Dbeam (control possibilities)	OFF, INPUTSW, DELAYTIME, FEEDBACK, MIX	MIX = Dry/Effect balance
Knob (control possibilities)	OFF, FEEDBACK, MIX	

Tempo Delay

Tempo Synchronized Delay

Parameter	Value	Comments/ Descriptions
Tempo	40 – 200, Metronome	Can sync with it's own tempo or the Metronome
Beat		delay time in note values
Feedback	0 – 98%	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, INPUTSW, FEEDBACK, MIX	MIX = Dry/Effect balance
Knob (control possibilities)	OFF, FEEDBACK, MIX	

TapeEcho

Old Style Tape Echo Machine

Parameter	Value	Comments/ Descriptions
RepeatRate	0 – 100	
Intensity	0 – 100	
EchoLevel	0 – 100	Return level
Dbeam (control possibilities)	OFF, RATE, INTENSITY, LEVEL	
Knob (control possibilities)	OFF, RATE, INTENSITY, LEVEL	

Overdrive

Similar to Overdrive Pedal

Parameter	Value	Comments/ Descriptions
Drive	0 – 100	
Tone	0 – 100	
DriveCutoff	0 – 100	
DriveLevel	0 – 100	
LowMix	OFF, ON	
Dbeam (control possibilities)	OFF, DRIVE, LEVEL, DYNAMIC	DYNAMIC = Drive+Tone+Cutoff+Level

Parameter	Value	Comments/ Descriptions
Knob (control possibilities)	OFF, DRIVE, LEVEL, DYNAMIC	

Distortion

Standard Distortion Unit

Parameter	Value	Comments/ Descriptions
Drive	0 – 100	
Tone	0 – 100	
DriveCutoff	0 – 100	
DriveLevel	0 – 100	
LowMix	OFF, ON	Adds low frequencies
Dbeam (control possibilities)	OFF, DRIVE, LEVEL, DYNAMIC	DYNAMIC = Drive+Tone+Cutoff+Level
Knob (control possibilities)	OFF, DRIVE, LEVEL, DYNAMIC	

Lo-Fi

Creates Low Quality Effect

Parameter	Value	Comments/ Descriptions
CompSens	0 – 100	Compressor sensitivity
FsRate	0 – 100	
BitRate	0 – 20	
LPFcutoff	0 – 100	Low Pass Filter cut off point
Dbeam (control possibilities)	OFF, RATE	RATE = Fs rate+LPF cutoff, QUALITY = Comp Sens+FsRate+BitRate+LPFcutoff
Knob (control possibilities)	OFF, QUALITY, RATE	

Ring Mod (Ring Modulator)

Standard Ring Modulator Effect

Parameter	Value	Comments/ Descriptions
Rate	0 – 100	
Depth	0 – 100	
Frequency	0 – 100	
Sens	-50 – +50	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, RATE, FREQ, SENS, MIX	MIX = Dry/Effect balance
Knob (control possibilities)	OFF, RATE, FREQ, SENS, MIX	

Pitch Sweep

Pitch Bending with a Sweep Effect

Parameter	Value	Comments/Descriptions
Pitch	-50 – +50	
Sens	-50 – +50	
Feedback	0 – 98%	
Dry:Effect	100:0 - 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, PITCH+, PITCH-, FEEDBACK, MIX	PITCH+ = pitch – maximum, PITCH- = pitch – minimum, MIX = Dry/Effect balance
Knob (control possibilities)	OFF, PITCH, FEEDBACK, MIX	

Wah

Similar to a Wah Wah Pedal

Parameter	Value	Comments/Descriptions
Sens	0 – 100	
Frequency	0 – 100	
Resonance	0 – 100	
Dbeam (control possibilities)	OFF, SENS, FREQ, RESO, PEDAL	PEDAL = Frequency (Sens=0)
Knob (control possibilities)	OFF, SENS, FREQ, RESO	

Flanger

Standard Flanger Unit

Parameter	Value	Comments/Descriptions
Depth	0 – 100	
Rate	0 – 100	
Resonance	0 – 100	
Delay	0 – 100	
Sens	-50 – +50	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, MOD, RESO, MANUAL, MIX	MANUAL = Rate+Delay (Rate=0), MOD = Depth+Rate+Mix, MIX = Dry/Effect balance
Knob (control possibilities)	OFF, MOD, RESO, MIX	

Step Flange (Step Flanger)

Standard Step Flanger

Parameter	Value	Comments/Descriptions
Sync	OFF, ON	Determines tempo source
Tempo	40 – 200, Metronome	Can be synchronized with the Metronome's tempo or the tempo set in the effect parameters
Beat		Values when SYNC is ON
StepRate	0 – 100	Values when SYNC is OFF
Depth	0 – 100	
Rate	0 – 100	
Resonance	0 – 100	
Delay	0 – 100	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, RATE, MOD, RESO, MANUAL, MIX	RATE = beat when sync is on, MOD = Depth+Rate+Mix, MANUAL = rate+delay, MIX = Dry/Effect balance
Knob (control possibilities)	OFF, RATE, MOD, RESO, MIX	

Phaser

Standard Flanger Unit

Parameter	Value	Comments/Descriptions
Depth	0 – 100	
Rate	0 – 100	
Resonance	0 – 100	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, MOD, MIX	MOD = Depth+Rate+Mix
Knob (control possibilities)	OFF, MOD, MIX	

Chorus

Chorus can "fatten" the sound

Parameter	Value	Comments/Descriptions
Depth	0 – 100	
Rate	0 – 100	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, MOD, MIX	MOD = Depth+Rate+Mix
Knob (control possibilities)	OFF, MOD, MIX	

Auto Pan

Automated Panning Effect

Parameter	Value	Comments/Descriptions
Speed	0 – 100	
Depth	0 – 100	
WaveShape	1 – 10	
Dbeam (control possibilities)	OFF, MOD	MOD = Speed+Depth
Knob (control possibilities)	OFF, MOD	

Reverb

Standard Reverb Unit

Parameter	Value	Comments/Descriptions
Type	HALL, ROOM, PLATE	Reverb choices
Time	0.1 – 5.0sec	Reverb length
LF Damp	THRU, 50 – 4000Hz	
HF Damp	1000Hz – 12.5kHz, THRU	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, DEPTH, MIX	DEPTH = Time+Mix
Knob (control possibilities)	OFF, DEPTH, MIX	

Delay Verb (Delay Reverb)

Delay and Reverb Combination

Parameter	Value	Comments/Descriptions
DelayTime	0.8 – 560ms	Pre-reverb delay time
Feedback	0 – +98%	
LowCut	THRU, 50 – 4000Hz	
ReverbType	HALL, ROOM, PLATE,	
Time	0.1 – 5.0sec	
HF Damp	1000Hz – 12.5kHz, THRU	
Dry:Effect	100:0 – 0:100	Balance of the non-effected sound and the effected sound
Dbeam (control possibilities)	OFF, FEEDBACK, DEPTH, MIX	DEPTH = Feedback+Time+ Mix
Knob (control possibilities)	OFF, FEEDBACK, DEPTH, MIX	

Instrument List

Instrument Name Abbreviations/Terms

When you see a “/” for example: AgogoBell L/H— it means that the sound will “velocity switch.” Soft dynamics will play the low sound and stronger dynamics will play the high sound.

OP = Open HT = Heel, Toe Botm = Bottom
 Cl, Cls = Close Ft = Foot Rels = Release
 Mt = Mute HnMt = Hand Mute Scrp = Scrape Strke = Stroke

Instrument List Indications

- : The group it is assigned to, as indicated in the LCD display. (p. 9)
- *H (HH Control): The Hi-hat sound works with Foot Switch Hi-hat control. (p. 26)
- *M (MUTE): The sound will change when muting with the hand. (p. 11)
- *P (POSITION): The sound, when assigned to the M 1 or M 5 pads, will change according to where it is played on the pads.
- *N (NOTE OFF): The sound reacts to Note on/off messages. (p. 22)

LATIN			No.	Inst	Remarks	No.	Inst	Remarks	WORLD		
No.	Inst	Remarks							No.	Inst	Remarks
			032	Timball Pila		066	Repiniq Hand	*M	093	Cajon	*P
			033	Claves 1		067	Repiniq HnMt		094	Cajon Slap	
			034	Claves 2		068	Pandeiro		095	Cajon Bass1	
001	Bongo Hi	*M, *P	035	Cowbell 1		069	Pande Thumb	*M	096	Cajon Bass2	
002	Bongo H /HT	*M, *P	036	Cowbell 2		070	Pande ThmbMt		097	Djembe	*M, *P
003	Bongo H Cls	*P	037	Cowbell 3		071	Pande Heel		098	Djembe Cls	*P
004	Bongo H Slap	*M	038	Cowbell 4		072	Pande Slap		099	Djembe Slap	*M
005	Bongo H Heel		039	Cowbell 5		073	Tamborim	*M	100	Djembe Bass	
006	Bongo H Toe		040	Cowbell 6L/H		074	Tamborim Mt		101	Djembe2	*M, *P
007	Bongo Lo	*P	041	Shaker 1	*N	075	Cuica	*M	102	Djembe2 Cls	*P
008	Conga Hi	*M, *P	042	Shaker 2	*N	076	Cuica Mute		103	Djembe2 Slap	*M
009	Conga H /HT	*M, *P	043	Ganza 1	*N	077	Caixa	*P	104	Djembe2 Bass	
010	Conga H Cls	*P	044	Ganza 2	*N	078	Caixa Rim		105	Talking Drum	
011	Conga H Slap	*M	045	Ganza 3	*N	079	Vibra-slap		106	PotDrum Body	
012	Conga H Bass		046	Maracas 1		080	Rain Stick		107	PotDrum Mute	
013	Conga H Heel		047	Maracas 2		081	Cricket		108	PotDrum Botm	
014	Conga H Toe		048	Caxixi		082	Flex Metal +		109	PotDrum Hole	*N
015	CongaH Slide		049	Shekere Bead		083	Flex Metal		110	PotDrum Rels	
016	Conga Lo		050	Shekere Botm		084	MetalCrasher		111	Tabla Na	
017	Conga2 Hi	*M, *P	051	Cabasa	*N	085	SteelDrum C		112	Tabla Tin	
018	Conga2H /HT	*M, *P	052	Afuche	*N	086	SteelDrum D		113	Tabla Tun	
019	Conga2H Cls	*P	053	Guiro1 Scrp	*M	087	SteelDrum E		114	Tabla Ti	
020	Conga2H Slap	*M	054	Guiro1 Strke		088	SteelDrum F		115	Tabla TinNa	*P
021	Conga2H Bass		055	Guiro1 Notch		089	SteelDrum G		116	Tabla TiNa	*P
022	Conga2 Lo		056	Guiro2 Scrp	*M	090	SteelDrum A		117	Tabla TunTin	*P
023	Timbale Hi	*P	057	Guiro2 Strke		091	SteelDrum B		118	Tabla Gin	
024	TimbalH Rim		058	AgogoBell Hi		092	SteelDrum c		119	Baya Ka	
025	TimbalH /Rim		059	AgogoBell Lo					120	Baya Ge	
026	TimbalH Pila		060	AgogoBel L/H					121	Baya GeKa	*P
027	Timbale Lo	*P	061	Surdo	*M, *P				122	Baya GeSlide	
028	Timball Rim		062	Surdo Mute					123	Dholak Ga	
029	Timball /Rim		063	Surdo Rim							
030	Timball Hand	*M	064	Repiniq	*P						
031	Timball HnMt		065	Repiniq Rim							

No.	Inst	Remarks	No.	Inst	Remarks	No.	Inst	Remarks	No.	Inst	Remarks
124	Dholak Ta		175	HuYinLuo Mt		222	Timpani B		273	TubularBel B	
125	Dholak Tun		176	Nao Bo		223	Timpani c		274	TubularBel c	
126	Dholak Na		177	Xiao Bo		224	Timpani d				
127	Dholak TunNa	*P	178	FingerCymbal	*M	225	Timpani e				
128	Darabuka Dom	*P	179	FingerCym Mt		226	Timpani f				
129	Darabuka Tak		180	Chenchen	*M	227	Glocken C				
130	Doira Dun	*P	181	Chenchen Mt		228	Glocken D				
131	Doira Tik		182	BaliCymbal	*M	229	Glocken E				
132	Doholla Dom	*M, *P	183	BaliCym Mute		230	Glocken F				
133	Doholla Sak		184	Ban Gu		231	Glocken G				
134	Doholla Tak	*M	185	Buk	*P	232	Glocken A				
135	Rek Dom	*P	186	Buk Rim		233	Glocken B				
136	Rek Tek		187	Jang Gu		234	Glocken c				
137	Rek Jing		188	Tang Gu		235	Xylophone C				
138	Bendir					236	Xylophone D				
139	AnkleBeads					237	Xylophone E				
140	AfricaJingle					238	Xylophone F				
141	Quijada					239	Xylophone G				
142	Sagat	*M				240	Xylophone A				
143	Sagat Mute					241	Xylophone B				
144	Bonang					242	Xylophone c				
145	Sitar					243	Vibraphone C				
146	Sitar Gliss					244	Vibraphone D				
147	Gyilli C					245	Vibraphone E				
148	Gyilli D					246	Vibraphone F				
149	Gyilli E					247	Vibraphone G				
150	Gyilli F					248	Vibraphone A				
151	Gyilli G					249	Vibraphone B				
152	Gyilli A					250	Vibraphone c				
153	Gyilli B					251	Marimba C				
154	Gyilli c					252	Marimba D				
155	Santoor C					253	Marimba E				
156	Santoor D					254	Marimba F				
157	Santoor E					255	Marimba G				
158	Santoor F					256	Marimba A				
159	Santoor G					257	Marimba B				
160	Santoor A					258	Marimba c				
161	Santoor B					259	HandBell C				
162	Santoor c					260	HandBell D				
163	JewsHarp					261	HandBell E				
164	Nagado Taiko	*P				262	HandBell F				
165	Nagado Rim					263	HandBell G				
166	Hira Taiko	*P				264	HandBell A				
167	Hira Rim					265	HandBell B				
168	Tsuzumi					266	HandBell c				
169	Ohkawa					267	TubularBel C				
170	Atarigane					268	TubularBel D				
171	Hyoshigi					269	TubularBel E				
172	Gengari	*M				270	TubularBel F				
173	Gengari Mute					271	TubularBel G				
174	HuYinLuo	*M				272	TubularBel A				

ORCHESTRA		
No.	Inst	Remarks
189	ConcertBD	
190	ConcertSnare	
191	PairCymbals	
192	Mallet Cym	
193	Large TamTam	
194	Sleigh Bell	
195	Tree Chimes	
196	Pin Chimes	
197	Bell Tree	
198	Crotale	
199	Wood Block H	
200	Wood Block M	
201	Wood Block L	
202	Wood Bk L/H	
203	TempleBlk H	
204	TempleBlk L	
205	TempleBk L/H	
206	Triangle	*M
207	Triangle Mt	
208	Triang Mt/Op	
209	Tambourine 1	
210	Tambourine 2	
211	Tambourine 3	
212	Castanets	
213	Ratchet	
214	Ratcht Notch	
215	ClapStick	
216	Whistle Shrt	
217	Whistle Long	*M
218	Whistle L/H	
219	Timpani F	
220	Timpani G	
221	Timpani A	

DRUMS		
No.	Inst	Remarks
275	AcuKick 1	
276	AcuKick 2	
277	AcuKick 3	
278	AcuKick 4	
279	ClubKick 1	
280	ClubKick 2	
281	ClubKick 3	
282	ClubKick 4	
283	808 Kick	
284	909 Kick	
285	AcuSnare1	*P
286	AcuSnare1 Rm	
287	AcuSnare2	*P
288	AcuSnare2 Rm	
289	AcuSnare3	*P
290	AcuSnare3 Rm	
291	AcuSnare4	*P
292	AcuSnare4 Rm	
293	AcuSnare5	
294	MarchSnare	*P
295	BrushSnare	*P
296	BrushSwish	
297	CrossStick 1	
298	CrossStick 2	
299	ClubSnare 1	
300	ClubSnare 2	
301	ClubSnare 3	
302	ClubSnare 4	
303	ClubSnare 5	
304	ClubSnare 6	
305	ClubSnare 7	
306	808 Snare	
307	909 Snare	
308	Kick/Snare	*P
309	AcuTom 1 Hi	
310	AcuTom 1 Mid	
311	AcuTom 1 Lo	
312	AcuTom 2 Hi	
313	AcuTom 2 Mid	
314	AcuTom 2 Lo	
315	BrushTom Hi	
316	BrushTom Lo	
317	ElecTom Hi	
318	ElecTom Mid	
319	ElecTom Lo	

Kit List

No.	Inst	Remarks	No.	Inst	Remarks	No.	Inst	Remarks
320	SpokeTom Hi		345	ClubHH2 Op		OTHERS		
321	SpokeTom Mid		346	ClubHH2 C/O				
322	SpokeTom Lo		347	808 HH	*H	No.	Inst	Remarks
323	OctTom Hi		348	808 HH Cl		368	HandClap	
324	OctTom Mid		349	808 HH Op		369	ClubClap	
325	OctTom Lo		350	808 HH Cl/Op		370	FlamencoClap	
326	808 Tom Hi		351	909 HH	*H	371	808 Claps	
327	808 Tom Mid		352	909 HH Cl		372	909 Claps	
328	808 Tom Lo		353	909 HH Op		373	FingerSnap	
329	AcuHH	*H	354	909 HH Cl/Op		374	78 Claves	
330	AcuHH Cl		355	CrashCym 1		375	78 Cowbell	
331	AcuHH Op		356	CrashCym 2		376	78 Maracas	
332	AcuHH Cl/Op		357	SplashCym 1		377	78 MetalBeat	
333	AcuHH Ft		358	SplashCym 2		378	78 Tamb	
334	AcuHH2	*H	359	ChinaCym		379	Scratch	
335	AcuHH2 Cl		360	AccentCym		380	Scratch LE	
336	AcuHH2 Op		361	Cup Chime		381	Scratch PP	*M, *N
337	AcuHH2 Cl/Op		362	808 Cym		382	Super Low	
338	AcuHH2 Ft		363	RideCym		383	SweepDown	
339	ClubHH	*H	364	RideCym Bell		384	Hammer	
340	ClubHH Cl		365	RideCym/Bell		385	AirDraft	
341	ClubHH Op		366	Brush Ride		386	AirRelease	
342	ClubHH Cl/Op		367	Ride/Crash		387	CarHorn	
343	ClubHH2	*H				388	FightGong	
344	ClubHH2 Cl					389	Bottle Blow	
						390	Bubble	
						391	Junk Beat	
						392	Glass Beat	
						393	Noise Beat	
						394	Toy Sound Hi	*M, *N
						395	Toy Sound Lo	*M, *N
						396	Clock Tick	
						397	Squelch	
						398	Glass Crash	
						399	Trash Can	
						400	VerbyStick	
						401	Thunder	
						402	SpaceGun	
						403	TechnoChirp	
						404	Zweeper	
						405	Ricochet	
						406	Transponder	
						407	WarpDrive	*M
						408	MicroScratch	*M
						409	MarsCode	
						410	Off	

Kit List

No.	Kit	No.	Kit	No.	Kit	No.	Kit
01	Latin Perc	17	Talking Dr	33	Xylophone	49	BitCrushGT
02	Djembe	18	Pot Drum	34	Vibraphone	50	DrumChat
03	Cajon	19	African	35	MelodicTom	51	DubDrum
04	Jazz Kit	20	Rek	36	Marching	52	HandPowerD
05	MiddleEast	21	Tabla	37	BalladPerc	53	Tee Bits
06	Pandeiro	22	Dholak	38	MuteContrl	54	Cosmo 42
07	LatinHouse	23	Darabuka	39	Drums	55	Scientific
08	Nature	24	India	40	Brushes	56	Creature
09	China	25	Silkroad	41	Elektronik	57	Droid
10	Orchestral	26	Gamelan	42	Metal	58	Horror
11	Conga	27	Japan	43	808 Kit	59	Suspense
12	Bongo	28	Korea	44	909 Kit	60	CarChase
13	Timbales	29	Handbells	45	Club Kit	61	Foley
14	BongoConga	30	Gyilli	46	BreakBeats	62	Breath
15	Repinique	31	HonkyTonk	47	JunkBeat	63	Noizes
16	Batucada	32	SteelDrum	48	Drum Set	64	Resounder

Style Guide Metronome Pattern List

No.	Pattern Name	Tempo	Meas	TimeSig	No.	Pattern Name	Tempo	Meas	TimeSig
01	Samba	90	1	4/4	44	Matsuri 1	86	2	4/4
02	SambaKick	126	2	4/4	45	Matsuri 2	131	2	4/4
03	Baiao	110	2	2/4	46	SamulNori 1	160	4	4/4
04	Surdo	100	8	2/4	47	SamulNori 2	100	4	5/8
05	Repinique	115	1	4/4	48	Pops Perc	96	4	4/4
06	Tamborim	120	2	2/4	49	GyilliBass	132	8	4/4
07	Carnival	120	4	4/4	50	MarimBass	116	4	4/4
08	AfroCuban	88	1	6/8	51	House	125	4	4/4
09	Bolero	120	2	4/4	52	2Step	132	4	4/4
10	Mambo	95	2	2/4	53	909 Techno	126	2	4/4
11	Merengue	160	2	2/4	54	Abstract	78	2	4/4
12	Calypso	100	1	2/4	55	R&B	100	2	4/4
13	Guaguanco	150	4	2/4	56	808 Slow	78	2	4/4
14	Comparsa	100	2	4/4	57	Jungle	148	4	4/4
15	Salsa	87	2	4/4	58	Funk	108	4	4/4
16	ChaCha 1	100	2	4/4	59	Rock	114	2	4/4
17	ChaCha 2	120	2	4/4	60	HardRock	144	2	4/4
18	Bongo	104	2	4/4	61	Metal	186	4	4/4
19	Djembe 1	117	1	4/4	62	8Beat	100	2	4/4
20	Djembe 2	113	1	4/4	63	16Beat	116	4	4/4
21	Djembe 3	120	4	4/4	64	DiscoBeat	116	2	4/4
22	African 1	130	2	4/4	65	SlowRock	68	4	4/4
23	African 2	145	1	4/4	66	Shuffle	122	4	4/4
24	African 9bt	97	1	9/8	67	Ballad	66	4	4/4
25	Spanish 12	120	1	12/8	68	BossaNova	144	4	4/4
26	Flamenco 1	106	4	4/4	69	Reggae	74	4	4/4
27	Flamenco 2	102	1	12/8	70	Swing	100	1	4/4
28	Flamenco 3	102	4	12/8	71	Brushes	80	4	4/4
29	Arab 4beat	100	2	4/4	72	March	120	4	4/4
30	Arab 10beat	120	2	5/4	73	Waltz	160	8	3/4
31	BellyDance	120	2	4/4	74	Son 3-2	100	1	4/4
32	Moroccan	100	2	4/4	75	Son 2-3	100	1	4/4
33	Orient 1	96	4	4/4	76	Rumba 3-2	100	1	4/4
34	Orient 2	96	2	4/4	77	Rumba 2-3	100	1	4/4
35	Polynesian	155	1	4/4	78	Cowbell 1	120	2	4/4
36	Tabla Folk	99	2	4/4	79	Cowbell 2	120	2	4/4
37	Tabla 16beat	120	4	4/4	80	Cowbell 3	112	1	4/4
38	Tabla 10beat	113	1	10/8	81	Shaker	104	1	4/4
39	Tabla 7beat	120	1	7/4	82	Maracas	112	1	4/4
40	PunjabiFolk	96	1	2/4	83	SleighBells	92	1	4/4
41	Gamelan	129	4	4/4	84	Triangle 1	108	1	4/4
42	China 1	90	4	4/8	85	Triangle 2	108	1	4/4
43	China 2	175	4	4/4	86	TempleBlocks	106	2	4/4

Glossary

PAf (Polyphonic Aftertouch)

(from p. 27)

An example of PAF is as follows: Let's say you are using the ROLL function on all the pads. If you press lightly on one pad, and more strongly on another, then their respective sound levels will be different.

Sens (Sensitivity)

(from p. 27)

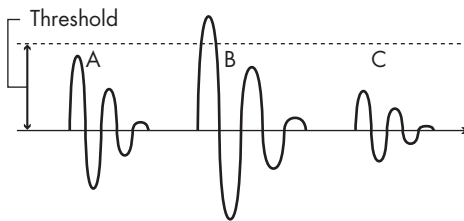
Define the sensitivity of the pad or the like to control the balance between the strike force and the sound volume. As the value increases, the sensitivity gets higher, which means that a louder sound is produced with weak strikes.

Threshold

(from p. 27)

Setting the Minimum Levels for the Pads

Allows a trigger signal to be received only above a determined velocity level. In the following example, B will sound but A and C will not sound.



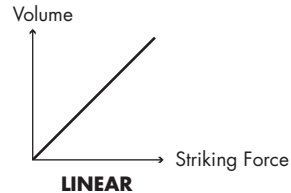
Curve (Velocity Curve)

(from p. 25, 27)

This setting determines the relation between playing velocity and changes in volume.

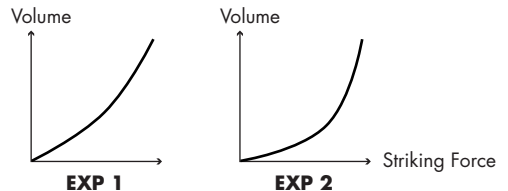
LINEAR

The standard setting, producing the most natural correspondence between playing dynamics and volume change.



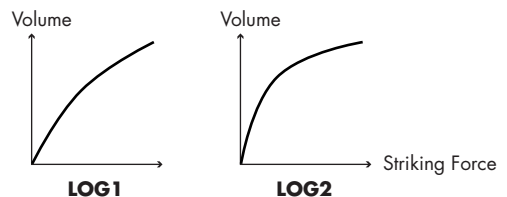
EXP1 (Exponential 1), EXP2 (Exponential 2)

Stronger dynamics produce a greater change.



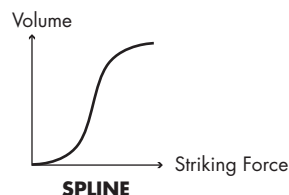
LOG1, LOG2

Softer dynamics produces a greater change.



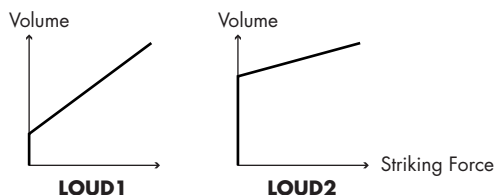
SPLINE

Extreme changes are made in response to playing dynamics.



LOUD1, LOUD2

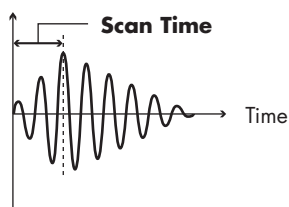
Hardly any dynamic response, easy to maintain strong volume levels. Ideal when using drum triggers.



Scan Time

(from p. 27)

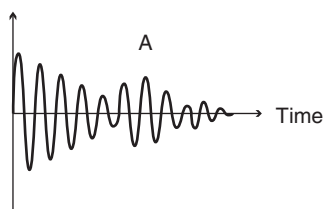
A trigger signal may differ slightly depending on the characteristics of each pad or acoustic drum trigger (drum pickup) being used. If identical hits produce sound at different volumes, you can adjust the "SCAN TIME" so that your way of playing can be detected more precisely. The higher the value the longer it will take for the sound to be played.



Retrig Cancel (Retrigger Cancel)

(from p. 27)

This is important if you are using acoustic drum triggers which can produce altered waveforms that may also cause inadvertent sounding at Point A in the following figure.



Retrigger Cancel detects such distortion in and prevents retriggering from occurring.

Setting this to a high value prevents retriggering, but may also cause sounds to be omitted during fast playing (roll etc.). Set

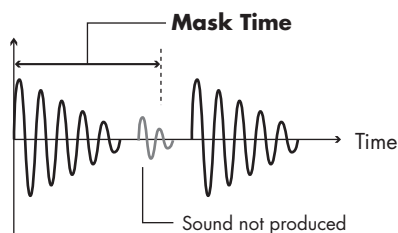
this to the lowest value possible while still ensuring that there is no retriggering.

MEMO You can also eliminate this problem of retriggering with the Mask Time setting.

Mask Time

(from p. 27)

Once a pad has been hit, any additional trigger signals received within the specified "Mask Time" (0-64 msec) will be ignored.



XTalk Cancel (Crosstalk Cancel)

(from p. 27)

An example of crosstalk is if two pads are mounted on the same stand, or nearby, and hitting one pad causes the other pad to sound. To eliminate this, adjust Crosstalk Cancel on the pad that is sounding inadvertently.

Rim Sens (Rim Sensitivity)

(from p. 27)

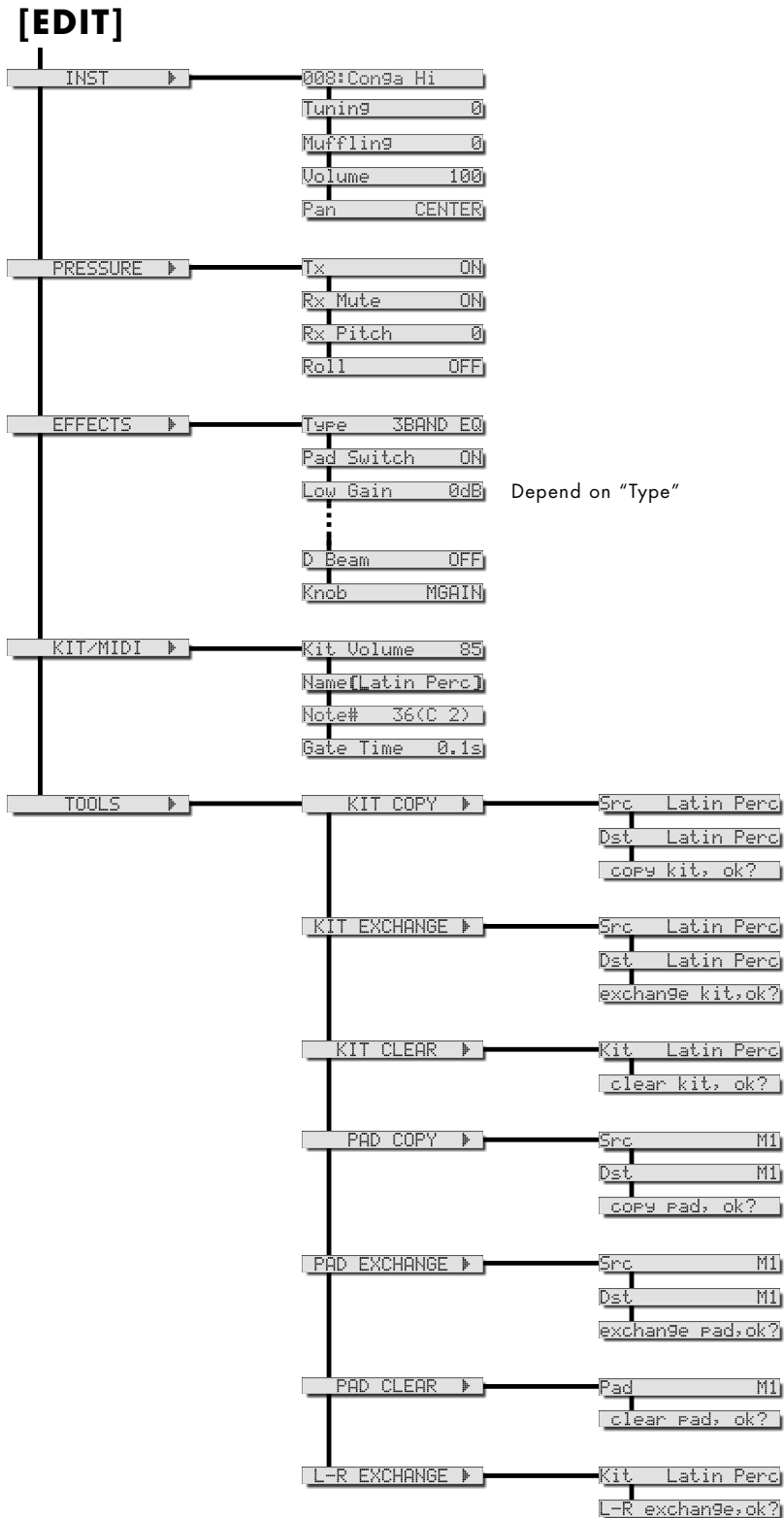
Control the sensitivity of the rim. As the value increases, the rim is more likely to produce a sound. When it is set to OFF, the instrument of the head is reproduced at a rim shot. Note that if the value is too large, the instrument of the rim will be produced when you strike the head.

Rim Gain

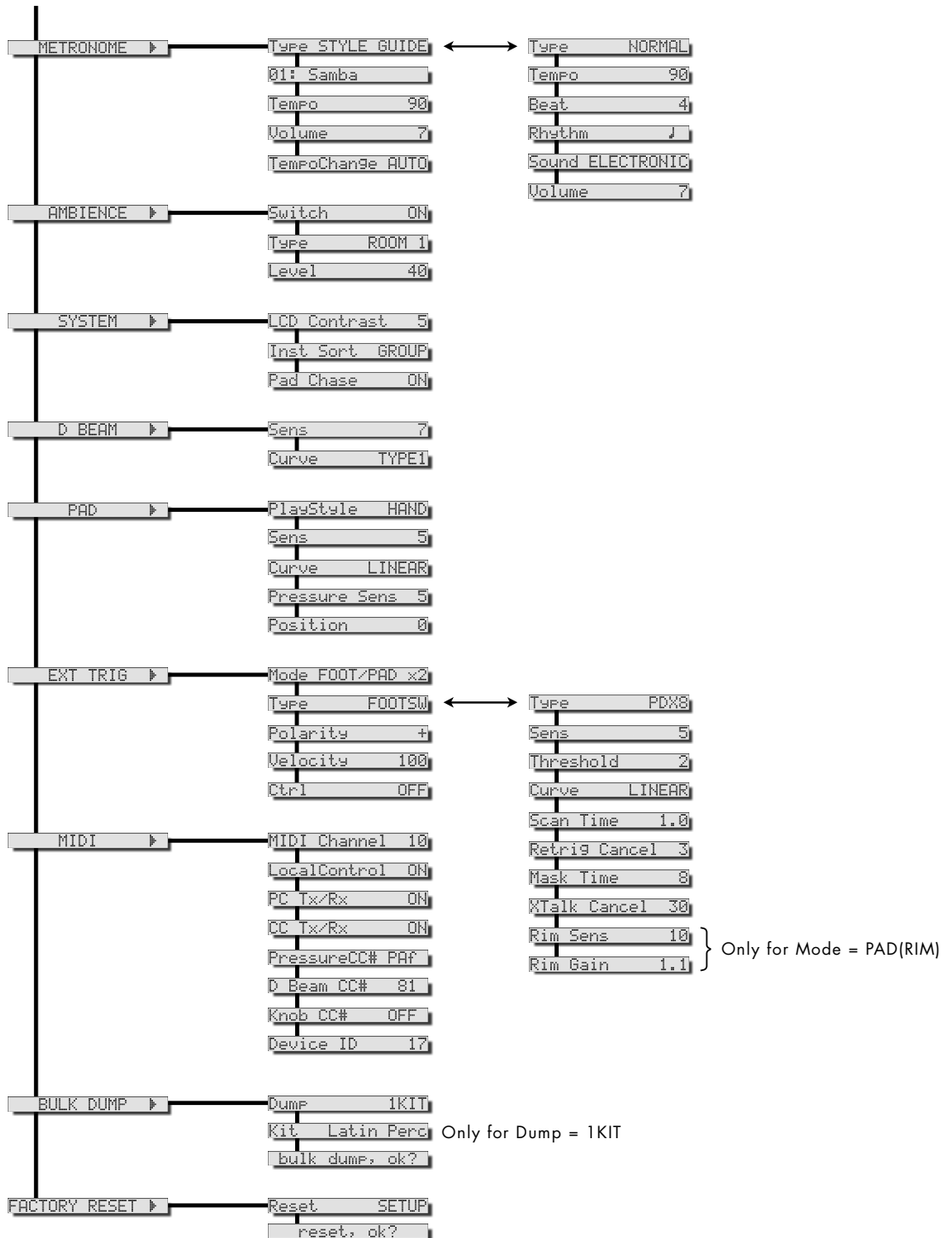
(from p. 27)

Control the sensitivity of the rim. Configure this parameter to change the sensitivity of the rim alone with that of the head left unchanged.

Interface Profile



SETUP ([SHIFT] + [EDIT])



MIDI Implementation Chart

PERCUSSION SOUND MODULE
Model HPD-10

MIDI Implementation Chart

Date : February 1, 2006
Version : 1.00

Function...	Transmitted	Recognized	Remarks
Basic Channel Default Changed	1-16, OFF 1-16, OFF	1-16, OFF 1-16, OFF	Memorized
Mode Default Messages Altered	Mode 3 x *****	Mode 3 x *****	
Note Number : True Voice	0-127 *****	0-127 0-127	
Velocity Note ON Note OFF	<input type="radio"/> 9nH, v=1-127 <input type="radio"/> 9nH, v=0 <input type="radio"/> 8nH, v=1-127 *1	<input type="radio"/> x <input type="radio"/> *1	
After Touch Key's Ch's	<input type="radio"/> *2 x	<input type="radio"/> *2 x	
Pitch Bend	x	x	
Control Change 4 16 17 81 1-5, 7-31, 64-95	<input type="radio"/> (Foot Sw) *2 <input type="radio"/> (Pad Position) *2 <input type="radio"/> (Pad Position) *2 <input type="radio"/> (D Beam) *2 <input type="radio"/> *2	<input type="radio"/> *2 <input type="radio"/> *2 <input type="radio"/> *2 <input type="radio"/> *2 <input type="radio"/> *2	Foot Control General Purpose Controller 1 General Purpose Controller 2 General Purpose Controller 6 Pad Pressure, D Beam, Knob
Prog Change : True #	<input type="radio"/> *2 *****	<input type="radio"/> *2 0-63	Program number 1-64
System Exclusive	<input type="radio"/>	<input type="radio"/>	
System Common : Song Pos : Song Sel : Tune	x x x	x x x	
System Real Time : Clock : Commands	x x	x x	
Aux Message : All sound off : Reset all controllers : Local Control : All Notes OFF : Active Sense : Reset	x x x x <input type="radio"/> x	<input type="radio"/> <input type="radio"/> x x <input type="radio"/> x	
Notes	* 1 Transmitted/Recognized when "Gate Time" is "GATE" or "ALT." * 2 o x is selectable.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO

O : Yes
X : No

Specifications

HPD-10: HandSonic 10

Pad

10 inches, 10 sections, Pressure-Sensitive

Instruments

410

Kits

64

Effects

Ambience (5 types)

Multi-Effects (20 types)

Style Guide Metronome

86 patterns

Tempo

40–200

Coach Mode

QUIET COUNT

RHYTHM CHECK

TIME CHECK

PAD FOLLOW

AUTO UP/DOWN

TAP TEMPO

Controllers

D Beam Controller

Control Knob

Display

Icon-driven Backlit LCD

Connectors

Output Jacks (L/MONO, R)

Phones Jack (Stereo)

Mix In Jack (Stereo)

Trigger Input/Foot Sw Jack (Dual)

MIDI Connectors (IN, OUT)

Power Supply

AC Adaptor (DC 9 V)

Current Draw

350 mA

Dimensions

323 (W) x 427 (D) x 75 (H) mm

12-3/4 (W) x 16-13/16 (D) x 3 (H) inches

Weight

2.9 kg / 6 lbs 7 oz (excluding AC adaptor)

Accessories

Owner's Manual

AC Adaptor

Options

Pad Stand (PDS-10)

Carrying Bag (CB-HPD-10)

Foot Switch (BOSS: FS-5U, FS-6)

Pedal Switch (DP-2)

Kick Triggers (KD-7, KD-8, KD-85BK/WT, KD-120BK/WT)

Pads (PD-8, PDX-8, PD-85BK/WT, PD-105BK/WT, PD-125BK/WT)

Cymbals (CY-5, CY-8, CY-12R/C, CY-14C, CY-15R)

Connection Cable (PCS-31L)

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

Demo Song List

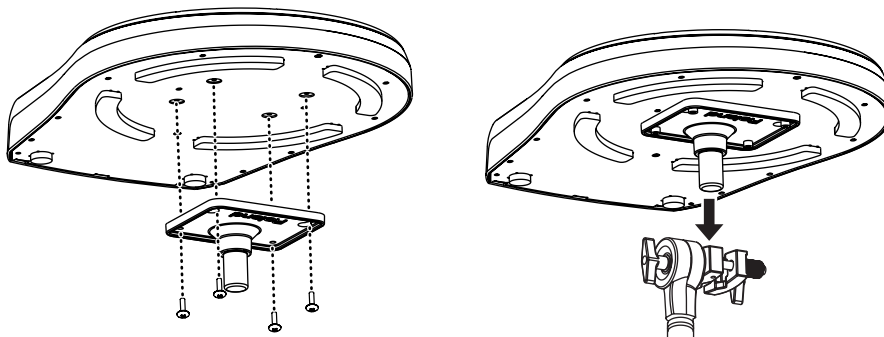
- 1. Latin Passion** Music by Ikuo Kakehashi
Copyright © 2006 Roland Corporation
- 2. Drums of India** Music by Ikuo Kakehashi
Copyright © 2006 Roland Corporation
- 3. Tropical Waves** Music by Ikuo Kakehashi
Copyright © 2006 Roland Corporation
- 4. Drums from Africa** Music by Roland Corporation
Copyright © 2006 Roland Corporation
- 5. Samba de Droid** Music by Ikuo Kakehashi
Copyright © 2006 Roland Corporation

** All rights reserved. Unauthorized use of this material for purposes other than private, personal enjoyment is a violation of applicable laws.*

Attaching the HandSonic 10 to the Stand (optional)

1. Using the screws already mounted on the bottom of the HandSonic 10, attach the stand holder as shown in the diagram below.








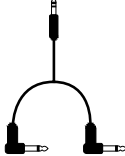

Use ONLY these screws, otherwise damage may result.



2. Mount the HandSonic 10 to the stand. (PDS-10)

For details on assembling the pad stand and attaching the HandSonic 10, refer to the owner's manual for the pad stand.

Options

<p>Pad Stand PDS-10</p> 	<p>Personal Monitor Amplifier PM-10</p> 	<p>Gig Bag for HandSonic CB-HPD-10</p>  <p>The CB-HPD-10 gig bag can hold the HandSonic, the PDS-10, AC adaptor, and headphones.</p>			
<p>Kick Trigger Unit KD-7</p>  <p>Bass Drum Pedal not included.</p>	<p>Foot Switch FS-5U</p> 	<p>Dual-Trigger Pad PD-8</p> 	<p>Dual-Trigger Cymbal Pad CY-8</p> 	<p>Trigger Cable PCS-31L</p> 	<p>Stereo Headphones RH-200S</p> 

Index

A

- Ambience 8, 24
- Assigning a Sound to a Pad 9
- Auto Up/Down 20

B

- Beat
 - Metronome 15
 - Pad Follow 19
- Bulk Dump 27

C

- CC Tx/Rx (MIDI) 27
- [COACH] button 17–20
- Coach Mode 17
- Control Knob 8
- Cord Hook 6
- Curve 27
 - D Beam 25
 - Grossaly 38
 - Pad 25

D

- D Beam 8, 13, 25, 28
 - Effects 21
 - Gate Time 22
- [D BEAM] button 8, 13
- D BEAM Control Change Number (MIDI) 27
- Demo Song 3
- Demo Song List 44
- Device ID (MIDI) 27

E

- [EDIT] button 9, 21
- Effect 8, 12, 21, 28
- [EFFECT] button 8, 12
- Effects List 30
- Error Messages 29
- EXP 38
- Exponential 38
- External Trigger Settings (EXT TRIG) 26

F

- Factory Reset 27
- Favorite Kit Jump Function 28
- Foot Switch 26
- Foot Switch Functions 26

G

- Gate Time (Kit/MIDI) 22
- Glossary 38

H

- HH CTRL 26

I

- Inst Sort 24
- Instrument List 34

K

- Kit 22
- Kit Clear 23
- Kit Copy 23
- Kit Exchange 23
- Kit List 36
- Kit Naming 12, 28
- KIT Volume (Kit/MIDI) 22
- Knob (Effects) 21
- Knob Control Change Number (MIDI) 27

L

- LCD Contrast 24, 28
- Level (Ambience) 24
- Linear 38
- Local Control (MIDI) 27
- Log 38
- Loud 39
- L-R Exchange 23

M

- Mask Time 27, 39
- Metronome
 - Normal 15
 - Short Cut 28
 - Style Guide 14
- Metronome Sound 16
- MIDI 27
 - Kit/MIDI 22
- Mode (Ext Trig) 26
- Muffling 8, 10
- Mute 11

N

- Naming a Kit 12
 - Short Cut 28

Index



NOTE OFF	22	SCRAPE	22
Note#	22	Sens	27
O		D Beam	25
Option	44	Sensitivity (Pad)	25
P		Setup	24
Pad	9	Short Cut	28
Pad Chase	24	Effects	21
Pad Clear	23	Effects Editing	12
Pad Copy	23	LCD Contrast	24
Pad Exchange	23	Metronome	16
Pad Follow	19	Naming a Kit	28
Pad Settings	25	Sound	9
Pad Switch (Effects)	21	Spline	38
PAf	38	Stand	44
Pan	10	Style Guide	14
PC Tx/Rx (MIDI)	27	Style Guide Metronome Pattern List	37
PlayStyle (Pad)	25	Switch (Ambience)	24
Polarity (Ext Trig)	26	T	
Polyphonic Aftertouch	38	Tap Tempo	20
Position	7	Tempo	
Position (Pad)	25	Metronome (Normal)	15
Positional Sensing	7	Metronome (Style Guide)	14
Power	7	Tempo Change (Metronome)	15
Preset Kit button	3, 7	Threshold	27, 38
Pressure	11	Time Check	18
Pressure Control Change Number (MIDI)	27	Time Signature (Beat)	15
Pressure Sens (Pad)	25	Tools	23
Q		Troubleshooting	29
Quiet Count	17	Tuning	8, 10
R		Tx (D Beam)	13
Rate (Auto Up/Down)	20	Type	
Restoring an Individual Kit to the Factory Settings	23	Ambience	24
Retrig Cancel (Retrigger Cancel)	27, 39	Effects	12
Rhythm (Metronome)	15	Ext Trig	26
Rhythm Check	18	U	
Rim Gain	27, 39	Undo	23
Rim Sens	27, 39	V	
Roll (Pressure)	21	Velocity (Ext Trig)	26
Rx Mute	11	Velocity Curve	38
Rx Pitch	11	Volume	10
D Beam	13	Metronome	14, 16
S		X	
Scan Time	27, 39	XTalk Cancel (Crosstalk Cancel)	27, 39

MEMO







USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About  WARNING and  CAUTION Notices








 WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
 CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols







	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 
- Do not open (or modify in any way) the unit or its AC adaptor. 
- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 
- Never use or store the unit in places that are:
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are 
 - Damp (e.g., baths, washrooms, on wet floors); or are 
 - Humid; or are
 - Exposed to rain; or are
 - Dusty; or are
 - Subject to high levels of vibration.
- This unit should be used only with a stand (PDS-10) that is recommended by Roland (p. 44). 
- When using the unit with a stand (PDS-10) recommended by Roland, the stand must be carefully placed so it is level and sure to remain stable. If not using a stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling. 

WARNING

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock. 
- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device. 
- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 
- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 


WARNING

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:



- The AC adaptor, the power-supply cord, or the plug has been damaged; or
- If smoke or unusual odor occurs
- Objects have fallen into, or liquid has been spilled onto the unit; or
- The unit has been exposed to rain (or otherwise has become wet); or
- The unit does not appear to operate normally or exhibits a marked change in performance.

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:



- The AC adaptor or the power-supply cord has been damaged; or
- If smoke or unusual odor occurs
- Objects have fallen into, or liquid has been spilled onto the unit; or
- The unit has been exposed to rain (or otherwise has become wet); or
- The unit does not appear to operate normally or exhibits a marked change in performance.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.



- Protect the unit from strong impact. (Do not drop it!)



- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.



- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.



CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.



- This (HandSonic 10) for use only with Roland stand PDS-10. Use with other stands (or carts) is capable of resulting in instability causing possible injury.



- Always grasp only the plug on the AC adaptor cord when plugging into, or unplugging from, an outlet or this unit.



- Always grasp only the output plug or the body of the AC adaptor when plugging into, or unplugging from, this unit or an outlet.



- At regular intervals, you should unplug the AC adaptor and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.



- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



- Never climb on top of, nor place heavy objects on the unit.



- Never handle the AC adaptor or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.



- Never handle the AC adaptor body, or its output plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.



- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.



- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 6).



- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.



- Should you remove screws for the stand, keep them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.



IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY" on page 48–49, please read and observe the following:

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

- Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up in another MIDI device (e.g., a sequencer), or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

Memory Backup

- This unit contains a battery which powers the unit's memory circuits while the main power is off. When this battery becomes weak, the message shown below will appear in the display. Once you see this message, have the battery replaced with a fresh one as soon as possible to avoid the loss of all data in memory. To have the battery replaced, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory in another MIDI device (e.g., a sequencer).
- Unfortunately, it may be impossible to restore the contents of data that was stored in user kit, once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- This instrument is designed to minimize the extraneous sounds produced when it's played. However, since sound vibrations can be transmitted through floors and walls to a greater degree than expected, take care not to allow these sounds to become a nuisance to neighbors, especially when performing at night and when using headphones.
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- The usable range of D Beam controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D Beam controller outside.
- The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the sensitivity as appropriate for the brightness of your location.



This product must be disposed of separately at your local waste recycling centre.
Do not dispose of in household waste bin.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.



This product complies with the requirements of European Directive 89/336/EEC.

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Roland®



* 0 4 1 2 9 6 4 5 - 0 2 *

04129645 '06-04-2N

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>