

ACOUSTIC DRUM TRIGGER

RT-7K KICK TRIGGER

RT-5S SNARE TRIGGER

RT-3T TOM TRIGGER

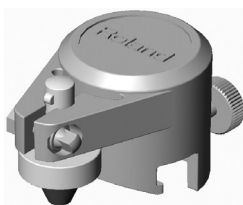
Owner's Manual

Thank you, and congratulations on your choice of the Roland Acoustic Drum Trigger.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 2; p. 3). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.



RT-7K



RT-5S



RT-3T



Copyright © 2003 ROLAND CORPORATION

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







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 (are forbidden). 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 perform any internal modifications on the unit. 


- 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


- 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


- 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!) 

CAUTION

- 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. 

- Should you remove screws, make sure to put them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally. 

- The back of this product has sharp protrusions to enable mounting on a drum. If the product is left placed on the floor, it may cause injury if inadvertently stepped on. Store out of the reach of children when not in use. 

IMPORTANT NOTES

In addition to the items listed under “USING THE UNIT SAFELY” on page 2, please read and observe the following:

Placement

- 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.

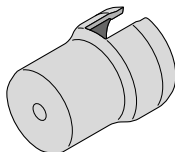
Additional Precautions

- 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.
- 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 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.

- When moving the drum trigger while it is mounted on a drum, grasp and hold the drum and not the drum trigger.
- Install this product according to the instructions in the owner’s manual. Never insert your fingers into the opening in the back or touch the circuit board inside.
- To avoid malfunction, never allow the sensor on the RT-7K or RT-5S to stand for a long time with diagonal force or severe deformation applied to it.
- The output of the acoustic drum trigger is affected by the head type, head tension, composition of the shell, place of use, and temperature, and may not produce sound as played.
- * In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Items in the Package

- Trigger unit
- Cable
- Protective sensor cover (RT-7K, RT-5S)



- Two hoop guards (RT-7K)
- Owner’s Manual (this document)

When carrying the RT-7K or RT-5S, be sure to attach the included protective sensor cover to prevent force from being applied to the sensor.

Getting Started

What Is a Drum Trigger?

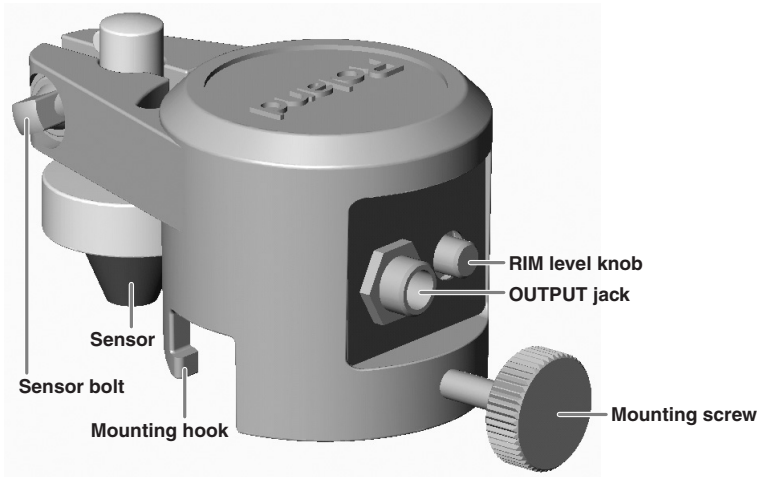
The sensor in the trigger converts vibrations from playing the head or rim to electrical signals, transmitting them to the sound module via the trigger input jack. This process is called "triggering."

Main Features

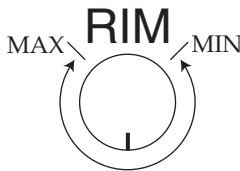
- High-quality acoustic drum trigger
- Easy to mount and remove
- A sensor structure that does not interfere with the natural sound of the acoustic drum
- Rugged die-cast structure that won't break if accidentally hit by a drum stick
- Use of V-Drums sensor technology (RT-7K, RT-5S)
- Capable of individual triggering for the head and rim (RT-5S)
- Connects directly to V-Drums sound modules, Trigger MIDI Converter (TMC-6), Rhythm Coach (RM-2), SPD-series pads equipped with trigger inputs

Part Names

(Example: RT-5S)



(RIM level knob)



Installing and Connecting

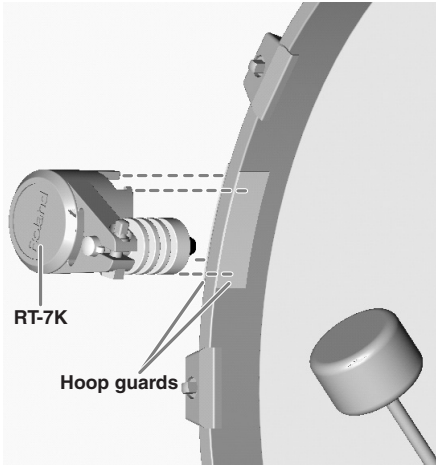
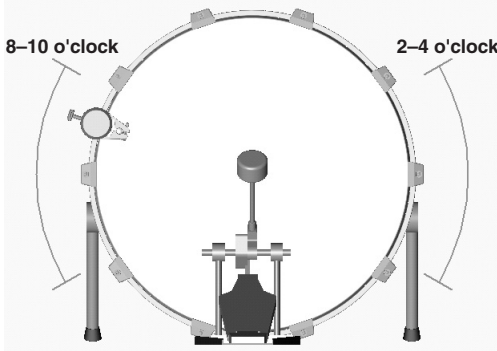


When making connections to other equipment, to prevent malfunction or damage to speakers or other devices, be sure lower the volume all the way before you switch on the power.

■ For the RT-7K Kick Trigger

1. Affix the two hoop guards included with the product to both sides of the hoop for the kick drum.

Affix these as shown in the figure, at locations where they will not interfere tension bolts at eight to ten o'clock or at two to four o'clock, as seen from the viewpoint of the player.



2. Use a tuning key to loosen the sensor bolt for the RT-7K.
3. Mount the RT-7K at the location of the hoop guards you affixed in step 1, and turn the mounting screw to secure in place.

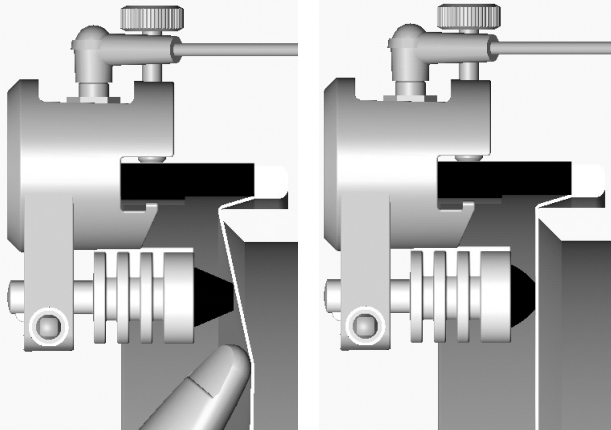


Tighten securely so that the trigger won't come loose and fall.

4. With your fingers, press down on the head of the kick drum at an area near where the sensor of the RT-7K makes contact. While continuing to press down, tighten the sensor bolt in place at the location where the tip of the sensor touches the head.



After securing the sensor in place, tighten so that the sensor is depressed by about 1/8 to 1/4 inch (3 to 5 mm) when you remove your fingers from the head. (This is important because it affects the sensor/trigging characteristics.)



Malfunction may occur if a gap forms between the sensor tip and the head when the drum is struck with force.



To ensure stable triggering, mute the head.

5. Using the cable included with the product, connect the OUTPUT jack on the RT-7K to the trigger input jack on the sound module.

■ For the RT-5S Snare Trigger

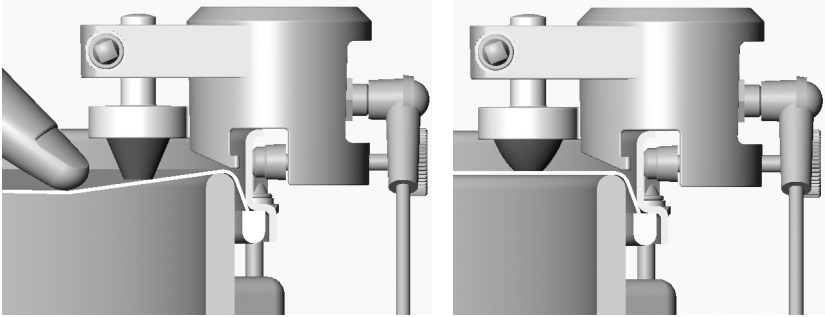
1. Use a tuning key to loosen the sensor bolt for the RT-5S.
2. Mount the RT-5S on the hoop of the snare drum and turn the mounting screw to secure in place.

Mount it at a location where it won't interfere with the tension bolts or get in the way when playing (on the side opposite the performer).

- With your fingers, press down on the head of the snare drum at an area near where the sensor of the RT-5S makes contact. While continuing to press down, tighten the sensor bolt in place at the location where the tip of the sensor touches the head.



After securing the sensor in place, tighten so that the sensor is depressed by about 1/8 to 1/4 inch (3 to 5 mm) when you remove your fingers from the head. (This is important because it affects the sensor/triggering characteristics.)



If there is a gap between the sensor tip and the head, malfunction may occur when the drum is struck with force.



If you want triggering that is even more precise, it may be effective to use a ring mute, or a muted head such as the PINSTRIPE™ from REMO Inc. When using a ring mute, first place the ring mute on the head, and then secure the RT-5S in place.

- Using the stereo cable included with the product, connect the OUTPUT jack on the RT-5S to the trigger input jack on the sound module.



The rim signals will not be output if a monaural cable is used.

- Turn the RIM level knob on the RT-5S clockwise to adjust the output level for rim signals. If the rim-shot sound comes out when you hard-hit the head, please lower the rim level.

■ For the RT-3T Tom Trigger

- Mount the RT-3T on the hoop of the tom and turn the mounting screw to secure in place. Mount it at a location where it won't interfere with the tension bolts or get in the way when playing (the rim on the side opposite the performer).
- Using the cable included with the product, connect the OUTPUT jack on the RT-3T to the trigger input jack on the sound module.



If two or more toms are tuned to close pitches, unstruck toms may resonate. Tune to pitches that are farther apart. Alternatively, use muting.

Tips and Tricks for Settings

Triggering when playing softly

Lowering the value for "Threshold" allows triggering even when hit lightly. However, if the value is too low, triggering may occur when another drum is hit with force. If this happens, increase the value for "Crosstalk cancel."

Eliminating Double Triggering

Three methods for avoiding double sounding. (two sounds produced with one hit)

- Raise the value of "Retrigger Cancel." IMPORTANT: If this value is too high, notes may "drop out" when struck repeatedly in rapid succession or during rolls.
- Raise the value for "Threshold." However, if this value is too high, triggering may be difficult when hit lightly.
- Mute using a ring mute or outside muffler, or use a muted head such as the PINSTRIPE™ from REMO Inc.

Preventing Crosstalk: Triggering Unhit Drums

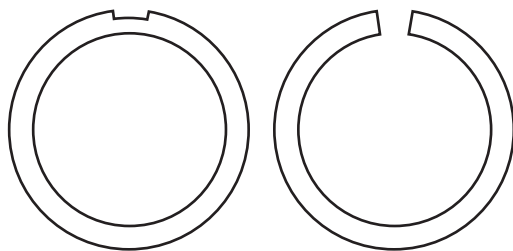
Check the points described below.

- Are the drums touching each other?
If parts of the rims or shells of a bass drum and a tom or of two toms are touching, vibrations may be transmitted to the other drum. Reposition so that they do not touch.
- Are toms tuned to close pitches?
If two or more toms are tuned to close pitches, unstruck toms may resonate. Tune to pitches that are farther apart. Alternatively, use muting.

If this doesn't resolve the problem, increase the value for "Crosstalk cancel." Note, however, that if this value is too high, triggering may be difficult when the drum and another drum are hit at the same time or when the drum is hit lightly.

Eliminating the floating of the ring mute

When you install RT-5S or RT-3T on a snare or a tom with a ring mute, the ring mute may float from the surface of the drum head due to the mounting hook pressing down on the edge of the ring. You won't get the full effect of the mute if it's floating. Should you avoid such floating, please cut off the part of the ring mute where the mounting hook will be placed.



Preventing the Cross talk from cymbals

RT-3T may pick up the vibrations of cymbal strokes and cause false triggering if a cymbal is set close to RT-3T. Should this be the case, try following.

- Set the cymbal as far apart from RT-3T as you can.
- Increase the Threshold value. Note that if you set the threshold too high, triggering performance will be poor at weak strokes.

If setting the trigger parameters for the sound modules doesn't give the desired response, try changing the location of the drum trigger and the mounting method, and refer to the following points and make adjustments.

- Mute kick drums and snare drums. If a tom produces multiple sounds when hit only once, mute the tom.
- To keep the drum trigger from picking up unnecessary vibration, make sure the connection cords for the drum trigger do not touch the rim or shell.

Setting Trigger Parameters for Sound Modules



Even when settings are made according to the parameter charts for sound modules, the intended sound may not be produced when played. Refer to the owner's manual for the corresponding sound module and readjust.

For information on how to set the trigger parameters, refer to the owner's manual for the corresponding sound module.

TD-10 with TDW-1

Parameter		RT-7K	RT-5S	RT-3T
	TYPE	KIK	12B	TOM
BASIC	Sensitivity	6	8	13
	Threshold	17	5	8
	Curve	Linear	Linear	LOG1
ADVNCNCD	ScanTime	2.0	2.0	3.5
	RetrigCancel	10	10	14
	MaskTime	12	12	24
	XtalkCancel	50	60	60
	MountType	PadMount	PadMount	PadMount

TD-10

Parameter		RT-7K	RT-5S	RT-3T
	TYPE	KIK	12B	TOM
BASIC	Sensitivity	3	4	6
	Threshold	5	3	6
	Curve	Linear	Linear	LOG1
ADVNCNCD	ScanTime	3.5	3.5	4.0
	RetrigCancel	12	8	7
	MaskTime	12	12	24
	Crosstalk	50	60	60

TD-8

Parameter		RT-7K	RT-5S	RT-3T
	TYPE	KIK	SNR	TOM
BASIC	SENSITIVITY	9	6	10
	THRESHOLD	8	5	5
	CURVE	LINEAR	LINEAR	LOG1
	RIM SENS	---	4	---
ADVNCNCD	SCAN TIME	2.0	2.0	4.0
	RETRIGCANCL	6	5	5
	MASK TIME	12	12	24
	CROSSTALK	50	60	60
	CROSS STICK	--	10	--

TD-6

Parameter		RT-7K	RT-5S	RT-3T
TRIG BASIC	TrigTyp	AcDrTrig	PD120	AcDrTrig
	Sensitivity	10	10	11
	Threshold	6	2	5
	TrigCurve	LINEAR	LINEAR	LOG1
	Xtalk Cancel	50	60	60
TRIG ADVNCD	Scan Time	2.0ms	2.0ms	3.5ms
	Retrig Cancel	6	4	5
	Mask Time	48ms	12ms	24ms
	Rim Sens	---	7	---

TMC-6 (Trigger MIDI Converter)

Parameter	RT-7K	RT-5S	RT-3T
VELOCITY CURVE	Lnr	Lnr	LG1
THRESHOLD	7	4	6
SENSITIVITY	8	10	11
TRG TYPE	Kik	Snr	toM
SCAN TIME	2.0	2.0	3.5
RETRIG CANCEL	4	4	8
MASK TIME	12	12	24
XTALK CANCEL	40	50	50

SPD-S

Parameter	RT-7K	RT-5S	RT-3T
InputMode	TRGx2	TRGx2 HD&RM	TRGx2
Type	RT-7K	RT-5S	RT-3T
Sensitivity	8	8	10
Threshold	8	4	8
VeloCrv	LINEAR	LINEAR	LOG1
Scan Time	2.5	2.5	3.0
RetrigCancel	8	4	5
Mask Time	12	12	12
XtalkCancel	35	35	50
Rim Sens	---	10	---
Rim Gain	---	1.2	---

* If you want to play the rim shot sound, set the InputMode to **HD&RM**.

SPD-20

Parameter	RT-7K	RT-5S	RT-3T
TRIG SENS	9	10	11
TRIG THRESHOLD	6	2	3
TRIG TYPE	KiK	120	toM
TRIG CURVE	0	0	1

Advanced Parameter	RT-7K	RT-5S	RT-3T
Scn (Scan Time)	20	20	30
rEt (Retrigger Cancel)	7	4	6
MSK (Mask Time)	12	12	24
CrS (Cross Talk Cancel)	50	60	60
riM (Rim Sensitivity)	---	3	---

HPD-15 (Hand Sonic)

Parameter	RT-7K	RT-5S	RT-3T
InputMode	TRIGx2	TRIGx2 HD/RM	TRIGx2
Trig Type	KICK	PD-120	TOM
Trig Sens	9	10	12
Curve	Linear	Linear	Log1
Threshold	12	5	8
Scan Time	2ms	2ms	3ms
Retrig Cancel	6	5	4
Mask Time	12ms	12ms	24ms
X-Talk Rate	50%	60%	60%
Rim Sens	---	6	---

* If you want to play the rim shot sound, set the InputMode to **HD/RM**.

RM-2 (Rhythm Coach)

Parameter	RT-7K	RT-5S	RT-3T
(Input Mode)	H-2	H-2 H-r	H-2
tyP (Trigger Type)	Kd	P12	Pd
thr (Threshold)	15	8	12
SnS (Sensitivity)	12	11	14
Cur (Velocity Curve)	Lnr	Lnr	LG1
Scn (Scan Time)	20	20	40
rtG (Retrigger Cancel)	8	10	9
Crs (Crosstalk Cancel)	50	60	60
MSK (Mask Time)	12	12	24
riM (Rim Sensitivity)	---	9	---

* If you want to play the rim shot sound, set the Input Mode to **H-r**.