Drum and Percussion Resource Guide
The World's Finest Electronic Drums and Percussion. PERIOD.
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Roland's Award Winning Product Support ...
There's little, if any, "hold" time, and it's FREE!

Drums & Percussion (323) 890-3743

What You'll find:
- Demo Videos
- "How to" Videos for most Sound Modules
- Searchable Product Support Section
- Technical Documents for Download, Including Manuals
- Complete Listings for All of Roland and Boss Products
Roland Drums & Percussion—

the Pro’s Choice
The World’s Finest Electronic Drums and Percussion. PERIOD.

Roland Drums & Percussion—

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The World's Finest Electronic Drums and Percussion. PERIOD.
The Roland Drum and Percussion Story...
Roland has been designing groundbreaking electronic percussion products for decades. With the introduction of V-Drums in 1997, a new era of electronic percussion was born. By combining innovative technologies with the dynamic playing experience that drummers expect, Roland V-Drums have become the standard by which all other electronic drum kits are measured. We Call This The V-Drums Advantage

**Patented Multi-Layer Mesh Heads**

*Roland’s mesh heads accurately reproduce your drumming techniques with outstanding responsiveness and sensitivity, and are easily adjustable to fit your individual playing style.*

*This unique multi-layer design is only available on Roland V-Drums.*

**A Quiet Innovation**

The unique design of the V-Drums’ mesh heads results in a drumhead that produces very little acoustic noise when struck. (The same is true when you play rim shots on the V-Drums’ rubber-coated rims.). With V-Drums, you can play with all the intensity you like, yet easily control the sound level with a twist of the volume knob. And for those late-night practice and recording sessions, just plug in a set of headphones.

**Superior Playing Feel**

You’ll experience a great acoustic drum feel when playing Roland V-Drums. Roland’s patented multi-layer mesh drumheads play and react similarly to the drumheads on acoustic drums. Designed to respond to the subtle nuances of your playing, they ensure that your drumming techniques are accurately reproduced. The multi-layer mesh head design allows a much wider tension range than single-layer mesh heads, so you can easily tension the heads for exactly the right feel to fit your playing style with a standard drum key.

**Quality & Durability**

Roland products are known for quality and durability and Roland multi-layer mesh heads are no exception. Designed to respond to the subtleties of your playing, Roland’s mesh heads are also extremely durable and can handle even the most aggressive drumming.

**Expressive Sounds**

*Roland has been on the forefront of cutting edge drum and percussion sounds for decades. With V-Drums, these sounds respond to the drummer’s playing techniques just like acoustic drums.*

**Dynamic Expression**

Like an acoustic instrument, Roland drum and percussion sounds change in volume when struck with increased strength, but also like an acoustic instrument, they also change tonal characteristics. Take an acoustic crash cymbal, for example: as the cymbal is struck harder, not only does the volume increase, but the tone of the sound changes as well. On most models, the cymbal pads can also be “choked” by squeezing the lower edge of the cymbal pad after it is struck, letting you instantly mute the cymbal sound just as you would by choking an acoustic cymbal.

**Expressive Hi-Hat Control**

Every V-Drums drum set includes the most expressive hi-hat control available, and gives you all the subtle tone colors an acoustic hi-hat. Not just open and closed - but all sound variations in between as you move the hi-hat pedal while playing the pad. Even hi-hat heel splashes are accurately reproduced.
Positional Sensing
*Advanced* TD-series sound modules feature Positional Sensing for acoustic like response and dynamics: the tonality of the sound changes depending on where the drum pad is struck. Playing the snare from near the rim toward the center produces a smooth natural change in tone. Playing the ride cymbal across its surface, moving toward or away from the bell also produces those subtle cymbal tonal changes.

Interval Control
*Advanced* TD-series sound modules also incorporate Interval Control. From a sharp snare back beat to a rapid double-stroke, to a blazing buzz roll, Interval Control allows for a seamless sonic response as you play faster, without the staccato, “machine-gunning” style repetition of early drum machines. Play a dramatic cymbal crash and smoothly transition into a sustained cymbal swell with acoustic-like response and dynamics.

Easy Editing
Customizing sounds is simple and fast with V-Drums. From the push button ease found on the TD-4, to icon based editing on the TD-9,TD-12, and TD-20X, you can quickly modify sounds and create customized kits. On advanced TD-series modules, the unique icon interface allows you to intuitively and easily change snare drum shell materials, drum shell depths, drumhead types, tuning, muffling, mic placement, room ambience, and more. This uncomplicated interface makes customizing your drum kits quick, rewarding, and fun, *and only Roland V-Drums have it.*

Practice Companion
Roland V-Drum modules include headphone jacks for quiet practice, a metronome with adjustable tempo, and a mix-input jack for connecting an external audio source (like an MP3 or CD player) so you can jam with your favorite songs. Some also include Roland’s Rhythm Coach® features that helps improve your drumming skills with intuitive and challenging exercises, and provides feedback on your performance to help you improve.

With other modules, you can explore different drumming styles by playing along with onboard songs and musical patterns, and check your progress with built-in recording features. You can also expand your recording capabilities and sound palette by connecting V-Drums to home computers, external sound modules, samplers and other electronic musical instruments.

Award-Winning Support
Roland’s free technical support—the best in the music industry—is just a phone call away. Whether you want to discuss your options with an expert before you buy, or need assistance with a brand new instrument or your favorite classic, Roland’s team of friendly specialists is ready to help. Another great resource is our website [RolandUS.com](http://RolandUS.com). Available 24/7, you can view product demos, instructional videos, and specs, and download owner’s manuals, software updates, and more!
V-Drums—the History

How Roland Became the Biggest Drum Company in the World

Roland has been designing innovative electronic percussion products since the company was founded in 1972. Over the years, Roland has released many breakthrough percussion products, like the classic TR-808 in 1980, the original Octapad-Pad 8 in 1985, and the R-8 Human Rhythm Composer in 1989. In 1992, Roland introduced the first complete electronic drum set, the TDE-7K.

In 1997, Roland introduced the revolutionary V-Drums - the TD-10 V-Pro Series. Featuring mesh head pads, cutting edge sounds, and a unique user interface, the original V-Drums set was a major technological breakthrough that was embraced by drummers, producers, recording engineers, educators, and others in the worldwide music community. Not surprisingly, professional drummers in virtually every musical style have accepted Roland V-Drums as an essential tool for their work in the studio and on stage.

This nearly 40-year commitment to electronic percussion innovation has elevated Roland’s stature to become the biggest drum company in the world.

Here’s an account of three V-Drum milestones, as told by Roland’s Hiroyuki Nishi and Steve Fisher.

1997: Birth of the V-Drums

Nishi: After Roland released the VG-8 (V-Guitar) in 1995, we had many requests to utilize our COSM® technology for drums. “Develop the V-Drums in addition to the V-Guitar!” they said. This COSM technology was mainly related to the sound module (TD-10) development, but we think the biggest turning point for V-Drums was the completion of the mesh head, which replaced the previous rubber pad, the PD-7.

In the PD-7, we used a floating structure to pull the rubber down to the edge of the pad, floating on the pad frame, which did not satisfy us.

Fisher: Plus, we felt the gum rubber pads were more like “synth” action (in keyboard terms), and we wanted to help drummers get an acoustic feel. The challenge was to get the acoustic feel without the acoustic noise. We knew that if we could provide drummers the “electronic counterpart” to
their acoustic drums — like keyboard player and guitar players have had for years — we would be successful.

**Nishi:** In order to get a good and natural feeling, we agreed that we should use something like film or skin as head material for the pad.

One day, our Mechanical Designer, Mr. Yoshino, visited a do-it-yourself shop — a supermarket for carpentry and gardening goods — and coincidentally found a small trampoline, which used a mesh-type material for the bouncing mat. He had an inspiration: Roland could use a mesh surface for the drum pad.

Although we could not find any good subcontractors to produce the mesh head in Japan, fortunately Mr. Kakehashi, the Founder of Roland, introduced us to Mr. Remo Belli, the Founder of Remo. We asked him to produce the mesh head for us, and he agreed.

**Fisher:** We did extensive testing with different types of mesh, weave patterns, densities, and combinations. We discovered that a certain kind of mesh, in two layers with the weave patterns at 45-degree angles, was the best — and we were able to patent it.

While developing the mesh head, we became aware of Remo’s Acousticon material used in their drum and percussion shells. That’s when we switched from the original steel-shell idea to the Acousticon shell. The Acousticon material not only gave us the desired “acoustic” drum look, it provided us with the ability to make any shell size, depth, and thickness. Also, it’s extremely strong, and we weren’t wasting any natural wood resources.

Although the mesh head was quiet, playing rim shots weren’t. One day while playing the prototype upside-down, we discovered that the rubber pour on the bottom of the shell felt great and was quiet. We asked Remo if they could also put a rubber pour on the top counterhoop. They made custom molds, and, sure enough, it worked great! It kept the whole performance of the drum quiet, which was a key benefit of electronic drums.

**Nishi:** At this point, we had completed two missions: to utilize the COSM technology for the sound module, and to improve the look and feel of the pad.
**2001: V-Cymbals®**

Before we arrived at the current materials/structure of the V-Cymbals, we engaged in the following tests:

- **Acoustic Cymbals (Metal Base) with Rubber Surface**

  To reduce the noise of acoustic sound, we attached the rubber on the bottom side of the acoustic cymbals, but when we hit the top cymbal (metal surface), it was too noisy. Also, when we tested rubber attached to both sides of the cymbals (upper/bottom), it was good in reducing the noise, but it was too heavy for use. And, to admit the worst, when we hit the pad too hard, it dented. This was not suitable.

- **Mesh Base**

  With our knowledge of mesh materials from the earlier-developed V-Pad, we tested the mesh base for V-Cymbals, but we could not design it in the shape of a real cymbal, even though we stretched the mesh very tight. Also, it produced a bad feel when played, so we had to give up the mesh idea.

- **Plastic Base with Rubber Surface**

  Since the metal- and mesh-base prototypes could not satisfy us in producing the ideal V-Cymbals, we went for a plastic base in the third revision. The plastic-based cymbal itself was not so good in terms of feel, and its sensitivity was limited when struck too far from the pickup point. Therefore, we improved the position and structure for the sensor.

  Since we had to connect the V-Cymbals to the sound module via cable, we considered how to stop the cymbal from revolving while allowing it to swing freely like a natural cymbal. But we solved this, and produced a V-Cymbal that could be mounted on a regular acoustic cymbal arm/stand without over-rotating.

  **Fisher:** Another issue we had was the vibration; which was making it difficult to trigger accurately, so we altered the shape of internal cymbal plate, which limited the vibration waves, and thus improved sensitivity and accuracy. We received a patent for this as well.
**Nishi:** The newest generation V-Drum kits (starting with the TD-20S) featured a new star component: the V-Hi-Hat.

Technically, there were two primary factors in the development of the V-Hi-Hat.

- **To accurately send the impact signal to the sound module.**
- **To send the information of the open/closed condition between the top and bottom pads to the sound module.**

To meet these goals, we set up the motion sensor in the center of the bottom pad, and we tried many mechanical structures, such as optical-type sensors or hall elements at the beginning. Finally we decided to use a spring to push down the sensor for sending the open/closed information to the sound module.

For the materials of the V-Hi-Hat, we used the same materials as the V-Cymbals: an internal base with rubber surface.

In order to improve hi-hat’s sensitivity consistency, we used a crescent shape part for the top pad. In order to distinguish which area of edge/bow was high, we used a special sensor for detection. Therefore, we required only two cables to be connected between the bottom pad and the sound module, while there is one link cable between the top and bottom hi-hat pads.

The V-Hi-Hat was developed and produced by a team of six R&D engineers, which included a mechanical designer, hardware designer, software programmer, and sound engineer.

Today, the V-Drum legacy of innovation continues with the new TD-12 drum module with Interval Control, the TD-12S V-Drum kit, and VH-11 floating hi-hat.
Multi-Layer Mesh Heads—*the Story*

**Why are V-Drums So Quiet?**

When an acoustic drum head is struck, the surrounding air vibrates, and sound is produced. The harder it’s struck, the more the head moves, and the louder the volume. With Roland’s patented mesh head, the air can pass through the gaps in the mesh fabric—the surrounding air does not vibrate. This is what makes the mesh head so quiet.

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**Multi-Layer Mesh Makes a Difference**

You see them stamped on every Roland drum head, numerous US Patent Numbers. One of these patents covers our multi-layer mesh heads for both electronic and acoustic percussion. In addition to being nearly silent, Roland two-ply mesh heads are extremely durable—much more so than single-ply mesh heads.

The two-ply structure also brings another amazing trait to the mix; it broadens the playable “feel-good” tension range. Simply put, two-ply Roland mesh heads feel better at much wider tension ranges than single-ply mesh heads.
Roland’s drum design is driven “by drummers, for drummers.” This is obvious in their sound, look, feel and playability, but less obvious in the technology behind the sounds, namely, COSM. Short for Composite Object Sound Modeling, COSM makes it possible for drummers to create and edit sounds using “acoustic drum” parameters.

What a great idea. We don’t have to learn much more than a few button pushes to enter the world of cutting-edge electronic drums. A derivative of COSM, called Variable Drum Modeling (Modeling for short), is found in the TD-20, TD-12, and TD-9 (ambience only) drum modules. Modeling allows us to use icons, or pictures to do most of the editing. You’ll see how ingenious this is a bit later.

COSM and the V-Drums

Of the five current drum modules—the TD-20 (V-Session), TD-12 (V-Stage), TD-9 (V-Tour®), TD-3 (V-Compact®) and HD-1 (V-Drums Lite®)—the top of the line TD-20 makes the most extensive use of COSM. The TD-12 and TD-9’s COSM use draws from a sub-set of the TD-20’s modeling parameters; with the exception of button pushes, the TD-12’s COSM editing is nearly the same as the TD-20, but with pared down editing parameters such as “shell depth” and “EQ”. The TD-20, TD-12, and TD-9 include the ability to “pitch bend” via the hi-hat controller pedal—making them extremely powerful. The TD-3, although benefiting from COSM, is technically not a modeling drum module. But, if you’ve played the V-Compact Set you can certainly hear the drum modeling influence, as the TD-3 sounds incredible—much better than its low price would suggest.

Beyond Sampling…

COSM technology is much more advanced than plain old sampling. With sampling, any edits made will affect the entire sample. This isn’t very sophisticated. For instance, if you change the pitch of a sampled snare drum, every aspect of that snare sound changes—attack, snare buzz, overtones, etc.—making it unrecognizable after as little as a fourth of an octave pitch change! With COSM technology, pitch changes of four octaves or more are possible without changing the original sound’s characteristics. That’s because modeling can change just the specific part of the sound, if needed, leaving the others alone. All this editing power is invisible to the user. Take a V-Edit snare, drop the pitch two octaves and you’ll hear COSM at work. Modeling rocks!

Try Some V-Editing

I meet a lot of drummers that never venture into the editing of their V-Drums® at all, and
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COSM® Explained (con’t)

this is fine. V-Drums sound GREAT right out of the box, because the factory drum kits are programmed by some of the best professional drummers in the business. But even if you haven’t done any editing, read on to see how COSM makes it simple to create your own custom set. Remember, you can always retrieve the factory sounds.

Editing COSM drum sounds is very easy and follows the natural path of the acoustic world “audio chain.”

- **Creating a drum including the shell, head, drum size and more.**
- **Miking the drum and placing it in a room to create the “ambient” sound.**
- **Plugging it into a control room for mixing, compression, EQ and effects.**

Let’s take a look at some of the editing subtleties within these three steps in the audio chain.

After choosing a drum we like from the drum module’s sounds, we enter Edit mode and the fun begins. You can choose from wood, steel, or brass shells for the snare (editing parameter to the TD-20 and TD-12). Keep in mind these aren’t three different samples, rather the sound’s “model” is altered to match how this shell change would sound in the acoustic world.

Accomplished, professional drummers worked with design engineers to make sure all the sounds are as true to life as possible. Some of the additional parameters that can be changed when designing a drum kit on the TD-20 & TD-12 are “shell depth”, “tuning”, “head type” (clear, coated or pinstripe), “snare tension” on & off (multiple tightness on the TD-20), and “muffling”. Muffling is one of my favorites. Roland has built in an
“endless roll of duct tape” in both sound modules. You can choose from no muffling, one or two pieces of duct tape or one of two sizes of doughnut-style muffling rings. Like I said earlier, all the editing is done with acoustic drum parameters.

The next step in the audio chain is the “studio.” Here, a room is created to add ambience to the drums. Ambience is what helps the sound of the drum set meld together into one cohesive instrument. The TD-20, TD-12 & TD-9 have many settings for “room type”, including “garage” and “theater”—my personal favorite. Each of the room types can be made different sizes, and the wall covering can be changed to further color the sound of the room!

The last stop in the audio chain is the “control room.” While the TD-20, TD-12 & TD-9 all have mixing and EQ, the TD-20 also has compression (two per pad) as well as an effects section. This is the easiest to understand COSM area, as most of us have experienced these types of sound control in the acoustic world.

Dimensions of Experience
One of the things traditional sampling, even multi-sampling, can’t do is change sonic characteristics of the sample during real-time performance. The cutting-edge TD-20 and -12 sound modules change all this. On certain COSM sounds and trigger inputs, the TD-20 and TD-12 sound modules are able to change a sound on-the-fly, based on player input. If you play harder, the sound changes gradually across the volume range. Playing the ride cymbal and snare drum in different spots changes the character of the sound —play from the center to the edge of the snare, and the sound changes like its acoustic counterpart. As you play certain snare drum and cymbal sounds with increasing speed (hitting interval), the attack of the sound gradually softens, all just like in the “acoustic” world! COSOM based drum modeling gives you Dimensions of Experience.

COSM Changes Everthing
Whether you just play the factory Patches or create your own custom kits, COSM brings the TD-Series drum modules to life using real world parameters. They’re easy to use, sound great and enhance your practice, live performance and recording in ways your acoustic drums cannot. Dig in and unleash the power of COSM.
Online Teaching Resources

**V-Drums Lessons**
Free video drum and percussion lessons featuring Gregg Bissonette, Brad Dutz, Johnny Rabb, and Mike Snyder. Subscribe to this ongoing series of lessons as a podcast on iTunes.

http://www.rolandus.com/vdrumslessons

**Play-Along Audio Tracks**
Download dozens of play-along tracks (without drums) in MP3 format!


**New Lessons for Drum Tutor, they’re free!**
Download new lesson content for Drum Tutor, including Drum Tutor files and lesson explanations in PDF format.

Drum and Percussion Products—

a Quick Guide
V-Drums

V-Drums Lite HD-1*

Features:
• Simple Interface
• DVD Manual Included,
  Featuring Johnny Rabb
• 10” Mesh V-Pad Snare
• Built-In Metronome
• Stereo Mix Input, Plug In Your iPod!
• Super Compact Design
• Easy and Quick to Setup, from One Box
• It’s Made for the Drum Tutor Software

*Shown with optional PM-01 and TDM-1 drum mat. Sticks not included.

Add the Optional PM-01, DAP-1, and TDM-1 Drum Mat for a Complete Solution
V-Compact Series TD-4S

Features:
- Incredibly Expressive!
- PDX-8 10” Mesh V-Pad Snare
- Compatible w/ CY-12R/C 3-way ride
- Compatible w/ VH-11 hi-hat.
- Rhythm Coach Features Built-In
- CY-5 Hi-Hat Cymbal
- Stereo Mix Input
- Upright KD-8 Kick Pad—Accepts Double-Kick Pedals

V-Compact Series TD-4SX

Features:
- Mesh PDX-6 Pads for the Toms!
- PDX-8 10” Mesh V-Pad Snare
- 2 Mesh PDX-6 Pads for rack Toms
- 2 PDX-8 10” Mesh V-Pads for Snare and Floor Tom
- Compatible w/ CY-12R/C 3-way ride
- Compatible w/ VH-11 hi-hat.
- Rhythm Coach Features Built-In
- Stereo Mix Input
- Upright KD-8 Kick Pad—Accepts Double-Kick Pedals
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V-Tour Series TD-9SX

Features:
- 50 Internal Songs Using Real Audio Tracks
- Stream Up to 99 WAVs from External Memory
- Rhythm Scope™
- Quick Record/Quick Play
- 10” PD-105 Mesh V-Pad Snare
- 8” Dual-Trigger Mesh Toms
- Great-Feeling CY-12 Three-Way Ride Cymbal
- Stereo-Mix Input
- Compact Footprint
- Two Additional Pad Inputs for Future Expansion

External USB Memory Port

V-Tour Series TD-9S

Features:
- 50 Internal Songs Using Real Audio Tracks
- Stream Up to 99 WAVs from External Memory
- Rhythm Scope™
- Quick Record/Quick Play
- 10” PDX-8 Mesh V-Pad Snare
- All Pads are Dual-Trigger
- Stereo-Mix Input
- Compact Footprint
- Two Additional Pad Inputs for Future Expansion

External USB Memory Port
V-Stage Series TD-12KX-S

Features:

• 50 User Kits
• Now with 12” KD-120 Kick Pad
• 150 Preset Sequences, & 100 User
• New COSM Parameters, Including Mic Modeling
• VH-11 V-Hi-Hat, Acoustic-Like Feel
• Great Feeling V-Cymbals
• Heavy duty stand with flexible mounting options
• Internal cabling
• Stereo Mix Input

V-Pro Series TD-20SX

Features:

• 100 User Kits—Over 10,000 accessible from Compact Flash Card
• Redesigned Kick, Snare, and Tom Pads
• Newly Expanded COSM Editing
• Interchangeable shell wraps
• VH-12 V-Hi-Hat for Acoustic-Drum-Like Feel
• Three-Way Triggering Ride
• Heavy duty stand w/metal clamps, flexible mounting options, and internal cabling
• 10 Analog Outputs plus S/P DIF Digital Output
• Stereo Mix Input

Shell wrap models:
CV-20KX-BU (Blue Brushed Metal)
CV-20KX-RD (Red Brushed Metal)
DT-HD1 Drum Tutor Software

Features:
• 34 preset patterns with SMF compatibility
• Notation screen with bouncing ball and timing check
• Game screen with falling blocks and score points
• Metronome, A-B repeat, drum mute, drum and pad solo
• UM-1G USB-MIDI interface and audio cable included
• Windows compatible (Vista/XP)

TDW-20 Expansion Card for the TD-20

It’s a simple equation:

TDW-20 + TD-20 + v2.51 software = TD-20X

Features:
• Wider drum dynamics and smoother sound control on the hi-hat
• Over 300 new sounds
• New ambience-type choices
• Enhanced V-Editing for new and existing COSM sounds
• Adjust how the kick affects the total resonance of the entire kit
Octapad SPD-30 Percussion Pad

Features:

- The New "Standard" of Percussion Controllers
- 670 world class drum, percussion, and FX sounds
- MIDI Via USB
- Phrase Loop Recorder - Record in real time, overdubbing up to 3 layers per phrase
- Onboard Effects
- Large, Easy-to-Read, Impact-Resistant Display
- 8 Isolated, Velocity Sensitive Pads
- 4 Dual-Trigger Inputs
- Hi-Hat Controller Input
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SPD-S Sample Pad

Features:
- Simple to Use Sampling
- Sample from any Audio Source
- Import & Export .WAV & .AIF Files
- Compact Design
- Expand Sampling Time with Compact Flash Media

Accepts 4Mb Compact Flash Cards (512 Mb Usable)
HandSonic 15

Features:
• Designed for the Hand Percussionist
• 15 Pressure Sensitive Pads
• Twin Ribbon Controllers
• D-Beam Controller
• Dual-Mono Trigger Input
• Hi-Hat Controller Input
• Onboard Sequencer
• Stereo Mix Input

HandSonic 10

Features:
• The HandSonic 15’s Little Brother!
• 10 Pressure Sensitive Pads
• Style Guide Metronome
• Dual-Mono Trigger Input
• Rhythm Coach Features
• D-Beam Controller
• Stereo Mix Input
RMP-Series Rhythm Coaches

RMP-12

A Revolutionary Marching-Percussion Instrument

Features:
- Dual-Trigger, 12-inch Mesh V-Pad
- Newly-Designed Module with Expressive Sounds
- Easily Attaches to Marching Carriers or Snare Stands
- Built-In Rhythm Coach for Improved Practice
- Lightweight Design
- Mix Input, Audio Out, & Headphone Out
- Battery or AC Operation

More Info @rolandus.com
RPM-5

Rhythm Coach with Built-in Sounds

Features:
- It’s Your Practice Buddy!
- Tunable 8” Mesh Head V-Pad<sup>®</sup> for Quiet Practice
- Six Rhythm Coach Modes with 29 Variations
- 54 Internal Drum & Percussion Sounds
- 15 Metronome Instruments
- Supports Time Signatures Up To 17 Beats per Measure
- Battery or AC Operation

Expand the RMP-5 into a 3-Piece Drum Set
CY-8, PDS-2 (x2), and KD-8. PCS-31L cable also needed (kick pedal not included).

PCS-31L
Trigger-to-MIDI Converters & Drum Triggers

TMC-6

Features:
- Ultra-Fast Triggering
- Up to 6 Dual-Trigger Inputs
- Hi-Hat Controller Input
- 3-Way Triggering Compatible
- 12 User Memory Settings
- Head & Rim, Mesh V-Pad Triggering on Input 2
- Mounting Plate Included

TMC-6 Applications

Application 1:
Use the TMC-6 to expand the number of inputs on a TD-6, TD-8, TD-12, or TD-20 sound module, as well as the SPD-20 and HPD-15.

Application 2:
Use the TMC-6 to play the sounds in keyboards, sound modules, soft-synths, or any other MIDI device using acoustic drum triggers, pads, or even audio.

RT-10 Series Drum Triggers

Kick Trigger
RT-10K

Snare Trigger
RT-10S

Tom Trigger
RT-10T
Amplification

PM-30 V-Drums Amplifier
- Bi-Amped (300 watt)
- Three Stereo Inputs
- Line Outputs
- Base Unit is Sub/Full Range Switchable

PM-10
V-Drums Personal Monitor Amplifier
- 10” 2-Way Coaxial Speaker
- 2 Band EQ
- Includes Stereo V-Drum Input
- Large Handle for Easy Transportation!

PM-01 V-Drums Lite Amplifier

Rear Connections
Rhythm Coach & Pad Stands/Mounts

**PDS-10**  
For use with HandSonics  
10/15, SPD-20/30, and SPD-S Sample Pad

**PDS-2**  
For use with RMP-1/3/5  
(8mm)

**APC-33**  
Compatible with all Roland drum modules, HandSonics, percussion pads, and sample pads.

**OP-RMP12**  
Mates RMP-12 to commonly used marching drum harnesses.  
*(Harness not included.)*
Important Note!

Always reinitialize drum modules and percussion controllers before beginning to show them to customers! With the exception of the HandSonics, all edits are automatically saved. Reinitializing the sound module will give you out-of-the-box settings for your demos.
Reinitializing the Octapad SPD-30

1. While holding down the KIT [<] [>] buttons (A & B), Power on the unit with the Power button (C).

2. Press the RESET button (D) 1x.

3. Press the OK button (D) 1x. (Same button, screen reads different.)

4. Done!
Reinitializing the TD-20/20X

➜ Press the [Setup] (A) button
➜ Press [F5] (B) three times.

Remember, [Setup], then [F5] three times.

Reinitializing the TD-12

➜ Press the [Setup] (A) button
➜ Press [F5] (B) three times.

Remember, [Setup], then [F5] three times.

Reinitializing the TD-9

➜ Press the [Setup] (A) button
➜ Press [F3] (B) four times.

Remember, [Setup], then [F3] four times.
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Reinitializing the TD-4

- Press the [MENU] button (A) so it's lit.
- Use the SEL [▲] [▼] buttons (B) to choose “9 OPTIONS,” and press the [OK] button (C).
- In the “Options” screen, press the SEL [▼] button a number of times to choose “Factory Reset,” and press the [OK] button (C).
- Use the [-/+] dial (D) to select the setting “All.”
- Press the SEL [▼] button.
  A confirmation message appears.
- Press the [OK] button (C).

Reinitializing the HPD-10

- While holding down the [SHIFT] button (A), press {EDIT}.
- Press the [▼] cursor button until you see “Factory Reset.” The choices are “SETUP, ALL KITS, ALL,” select “ALL.”
- To execute the reset, press the [▼] button again, a confirmation screen will appear.
- Press the “OK” button [4] to execute reset.

Reinitializing the HPD-15

- Press [System] (A) button 1x
- Repeatedly press the right [Parameter] (B) button until the display reads “System Reset”.
- Turn the [Value Wheel] until the display reads “All”.
- Press the [Write] (D) button 2x's.
  That's all there is to it ...
  The HandSonic 15 is reinitialized!
Reinitializing the RMP-5

➜ Start with the power off.
➜ While holding down the [Start/Stop] button (A), power up the RMP-5.
➜ The display will read "rSt."
➜ Release the [Start/Stop] button.
➜ Press and hold the [Start/Stop] button 1-2 seconds, or until the display flashes.
➜ Release the [Start/Stop] button

Reinitializing the RMP-12

➜ Hold down the [BEAT] button (A) for a while. The SYSTEM icon will blink in the display.
➜ Turn the select knob to choose “Reset...,” and then press the select knob (B). The display will ask “Sure?”
➜ Turn the select knob (B) to choose “YES,” and then press the select knob (B).

Legacy Reinitialization Guides

Reinitializing the TD-10

➜ Press the [Setup] (A) button
➜ Press [F4] (B) four 4x.

Remember, [Setup], then [F4] 4x
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Reinitializing the TD-8

- Press the [Setup] (A) 1x
- Press the [Cursor Down] button (B) until the menu above [F3] (C) reads “Reset”
- Press [F3] (C) 3x.

Remember, [Setup], cursor down to “Reset”, then [F3] three times.

Reinitializing the TD-6/6V

- Hold [Shift] (1), Press [Edit/Setup] (2)
- Release the Buttons
- Press the [Right Cursor] (3) 6x to “Factory Reset”
- Press [Enter] (4) 3x

Reinitializing the TD-3

- With the power off, press and hold down the [-] (A) and [+](B) buttons
- With the buttons still depressed
  Power on the TD-3
- The display will read "rSt"
- Release the buttons
- Press the [DRUM KIT] button for a few seconds
- Wait for the LED’s finish scrolling across the face of the TD-3
Reinitializing the SPD-20

→ With the power off, press and hold down the two bottom, outside buttons (A & B)
→ Power on the SPD-20 with the power button on the rear panel
→ Release the outside buttons
→ The display will flash “INT”
→ Press “Enter” 1x

Reinitializing the RMP-3

→ With the power off, press and hold down the [Start/Stop] button
→ Power up the RMP-3
→ The display will read "rSt"
→ Release the [Start/Stop] button
→ Press and hold the [Start/Stop] button 1-2 seconds
→ Release the [Start/Stop] button

Reinitializing the RMP-1

→ With the power off, press and hold down the [Value-Up Arrow] (A), [SEL] (B) and [Metronome] (C) buttons
→ With these 3 buttons still depressed,
  Power up the RMP-1
→ The display will read "rSt"
→ Release the buttons
→ Press the [Metronome] (C) button 1x
Restoring the SPD-S to Factory Settings

Factory Restore of patches and WAV files to the SPD-S

Since the SPD-S is a sample pad, the sounds contained in from the factory are stored not in ROM (like the SPD-20, HPD-15 & TD-Series drum modules), but are stored in internal memory that may be deliberately, or inadvertently erased. The samples (WAV's) and patches must be restored from the data contained on the CD-ROM that originally shipped with the SPD-S. If you cannot find this CD-ROM, please contact Roland customer service for a replacement.

To restore the factory settings, you will need:

- CompactFlash Card (32 Mb, minimum, no larger than 512Mb)
- Computer (PC or Mac), with CompactFlash card reader and CD-ROM drive.
- SPD-S CD-ROM
  (Originally came bundled with the SPD-S owners manual)
- SPD-S Pad (to be restored)

Detailed Factory Restore instructions are on page 117-118 of the SPD-S Owners Manual

These instructions will take you through:

- Using the computer to load the CD-ROM & copy the required files onto the CompactFlash card.
- Loading the data on the CompactFlash card into the SPD-S

Note on "wave protect":

If while trying to restore the factory data, the SPD-S displays reads "wave protect on", you must first turn off "wave protect" before you will be able to successfully load the factory data.

To turn off "Wave Protect":

- With the power to the SPD-S off ...
- Hold down the "WAVE" & "SETUP" buttons
- While continuing to hold these buttons down and power up the SPD-S
- Continue to hold these buttons down until the SPD-S display reads "wave protect off"
- Release the buttons, "wave protect" in now "off"

Repeat the Factory Restore power up procedure (#6 on page 117 of the SPD-S Owner's Manual).
Clickable Links to Owner’s Manuals
(Requires internet access.)

**Drum Modules:**

- **TD-20X**

- **TD-20**

- **TD-12**

- **TD-9**

- **TD-6/6V** (NOT AVAILABLE)

- **TD-4**
  http://www.roland.com/products/en/_support/om.cfm?PRODUCT=TD%2D4

- **TD-3**

- **HD-1**
  http://www.roland.com/products/en/_support/om.cfm?PRODUCT=HD%2D1

**Percussion Pads/Other:**

- **SPD-S**

- **SPD-30**

- **SPD-20**

- **HPD-15**

- **HPD-10**

- **DT-HD1**
  http://www.roland.com/products/en/_support/om.cfm?PRODUCT=DT%2DHD1

- **RMP-5**

- **RMP-12**

- **TDW-20**
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V-Drums Setup Suggestions
Tom mounts with L-arms should be positioned out and up from the player. This allows the toms to be positioned a little bit farther away from the player. This is especially helpful on drums sets with smaller stand footprints, like the V-Tour, and V-Compact Series.

Cymbal arm clamps should be positioned so that the cymbal arms extend up from the side of the stand opposite the player.
V-Cymbals require the use of the supplied Rotation Stopper, felt, and wing nut to function properly. The cast Rotation Stopper is used to keep the cymbal from rotating on the cymbal arm. The CY-12H V-Hi-Hat does not use the cast Rotation Stopper.

Also required is one cable for each cymbal (2 for the CY-15R & CY-12R/C triple trigger rides, found on the TD-20S & TD-12S drum sets).

1. Place the cast Rotation Stopper on the cymbal arm as shown in the photo to the right, and tighten it snugly to the cymbal arm. From the players perspective, the Rotation Stopper should be parallel to the player. This keeps the chokeable area of the V-Cymbal’s edge in the proper position for playing and choking.

2. Plug the supplied stereo cord into the 1/4” jack on the middle underside of the V-Cymbal (The CY-15R & CY-12R/C ride cymbals found on the TD-20 & TD-12S drum sets each use 2 stereo cables, Bell/Bow into the “Ride” input & Bow/Edge into the “Ride Edge” input). Set the cymbal onto the Rotation Stopper already on the cymbal arm, and screw on the felt and wing nut.

3. When placed on the MDY-10U arm, the Roland logo should be correctly readable from the player’s position. The chokeable portion of the cymbal is the 1/2 of the pad that is opposite of the Roland logo. This positioning is essential to using the choke feature, as well as playing the edge trigger.
**VH-12 Clutch & Rotation Stopper Setup**

Similar to the CY-Series ride and crash cymbals, the VH-12 V-Hi-Hat uses a rotation stopper device to stop the bottom pad from spinning on the stand, causing the edge trigger to rotate out of position, making the edge unplayable, and possibly damaging the cables.

---

**Proper Setup**

Slide the bottom VH-12 V-Hi-Hat cymbal onto the hi-hat stand. Make sure that the cymbal tilter is in a flat position. If it is tilted, it may cause the hi-hat rod to bind. Plug the short patch cable into the jack on the inside of the bottom cymbal.

Next, attach the Roland supplied clutch to the top VH-12 V-Hi-Hat cymbal. **DO NOT USE THE ACOUSTIC HI-HAT CLUTCH!**

Slide the top cymbal with clutch over the hi-hat rod. Plug the other end of the short patch cable into the inside jack of the VH-12 top cymbal.

The rotation stopper assembly consists of 2 pieces: the black plastic rotation stopper, and the cast metal clamp that secures it to the hi-hat stand. Three sizes of the black plastic rotation stopper are supplied. They are marked "S", "M" and "L" on the inside (small, medium & large). Choose the size that best fits the hi-hat stand you are using.

Attach the 2 piece rotation stopper assembly around the hi-hat stand, and loosely tighten the tension rod. Fit the balls on the ends of the 2 "antenna" looking parts of the rotation stopper into the slots on the bottom of the bottom VH-12 cymbal.

Before securely tightening the tension rod on the rotation stopper assembly, rotate the hi-hat cymbals so that "triangle" the edge of the 2 cymbals line up with one another and are facing the player (this is very important for the proper functioning of the VH-12’s).

With the hi-hats properly positioned, gently pull down on the rotation stopper assembly, and snugly tighten the rotation stopper's tension rod so that assembly is under a little bit of tension.

Follow the owner manual's instructions on calibrating the VH-12 V-Hi-Hats (*TD-20 & TD-12 only*). Your done!
### Mesh Heads

<table>
<thead>
<tr>
<th>Mesh Head</th>
<th>Fits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MH-6 (6” Mesh head)</td>
<td>PDX-6</td>
</tr>
<tr>
<td>MH-8 (8” Mesh head)</td>
<td>KD-85, PD-85, PDX-8, RMP-3, RMP-5, (also KD-80, PD-80/80R, RMP-1)</td>
</tr>
<tr>
<td>MH-10 (10” Mesh head)</td>
<td>PD-105, PD-105X, (also PD-100)</td>
</tr>
<tr>
<td>MH-12 (12” Mesh head)</td>
<td>KD-120, PD-125, PD-125X, PD-125XS, RMP-12 (also PD-120)</td>
</tr>
<tr>
<td>MH-14 (14” Mesh head)</td>
<td>KD-140</td>
</tr>
</tbody>
</table>

*MH-6 (6” Mesh head) not pictured*
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<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02457612</td>
<td>Rotation Stopper</td>
</tr>
<tr>
<td>02455790</td>
<td>Cymbal Felt</td>
</tr>
<tr>
<td>02455801</td>
<td>Plastic Wingnut</td>
</tr>
</tbody>
</table>

All 3 parts pictured below are also packaged together - Product ID CYM-10

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For CY-5 (when used as hi-hat cymbal pad)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C6400022R0</td>
<td>Upper Clutch</td>
</tr>
<tr>
<td>C6900010R2</td>
<td>Clutch Felt (S)</td>
</tr>
<tr>
<td>C690009R0</td>
<td>Clutch Felt (L)</td>
</tr>
<tr>
<td>C6400023R0</td>
<td>Lower Clutch</td>
</tr>
</tbody>
</table>

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Upper Clutch

Clutch Felt (S)
**Roland Drums & Percussion Resource Guide**

KD-8 Key Bolts

| C7000003R0 |

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Coil Spring / Foot Bolt for FD-8, KD-7, KD-8

| 22175276 | Coiled Spring |
| C7000050R1 | Foot Bolt (Spike) |

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For KD-120, KD-85 leg

| 01676134 | Metal Nut |
| 01673001 | Rubber Foot |

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*Diagram showing KD-8 Key Bolts, Coiled Spring, and Rubber Foot.*
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<table>
<thead>
<tr>
<th>VH-12 Clamp Holder / Rotation Stopper Clamps</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>03563634</td>
<td>Clamp Holder</td>
</tr>
<tr>
<td>03457701</td>
<td>Rotation Stopper Clamp (S)</td>
</tr>
<tr>
<td>03457690</td>
<td>Rotation Stopper Clamp (M)</td>
</tr>
<tr>
<td>03457712</td>
<td>Rotation Stopper Clamp (L)</td>
</tr>
</tbody>
</table>

VH-12 Clutch Assembly

VH-12 Clutch Assembly

VH-12 Link Cable

VH-12 Link Cable
Don’t Make Johnny sad ...
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Notes: