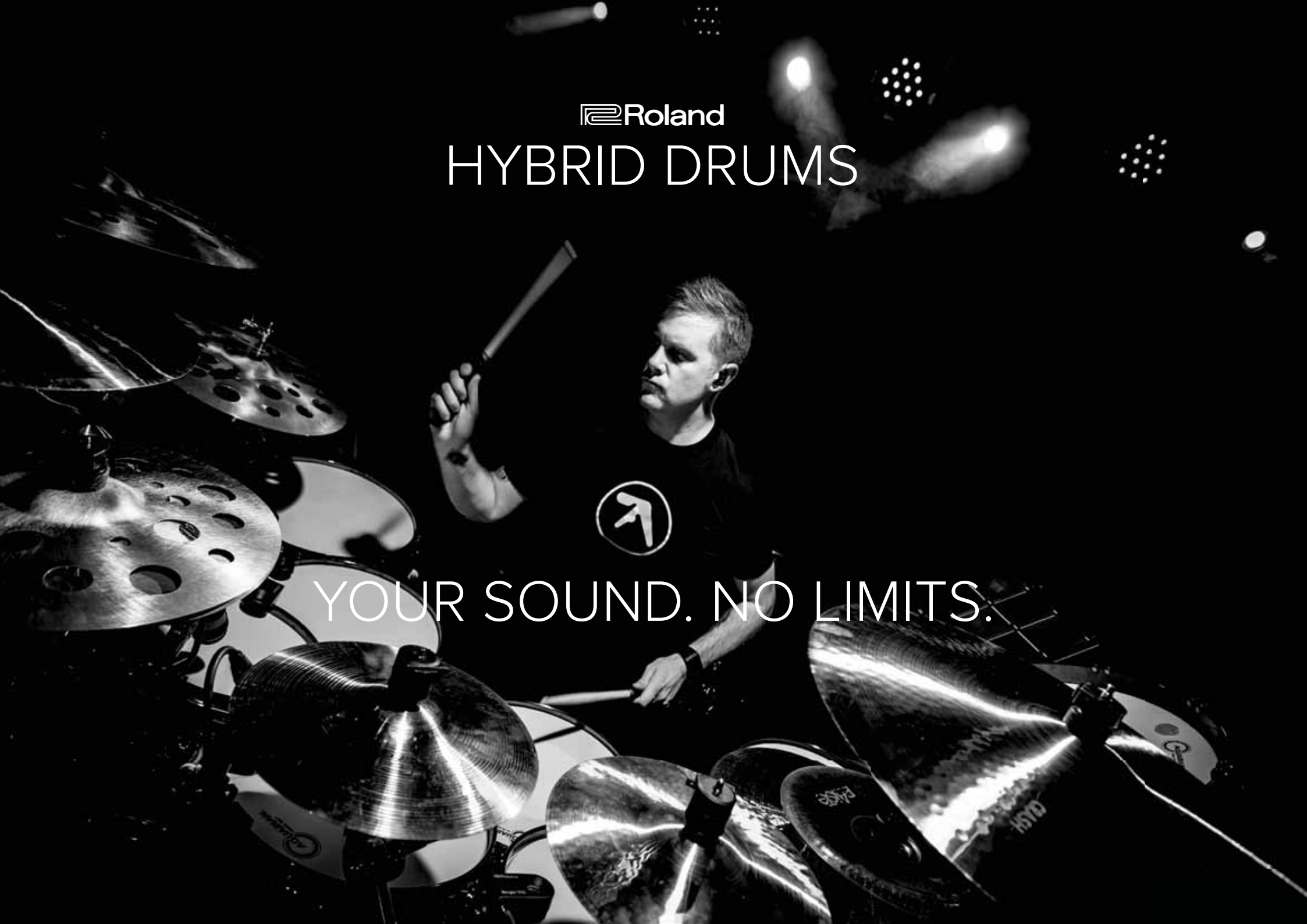
Roland
HYBRID DRUMS
YOUR SOUND. NO LIMITS.

ACOUSTIC & ELECTRONIC
HYBRID DRUMS

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HYBRID DRUMMING EXPLAINED

ACOUSTIC & ELECTRONIC
HYBRID DRUMS

INTRODUCING THE HYBRID ACOUSTIC & ELECTRONIC KIT

As modern drummers, we want the best of both worlds. Sure, we love our acoustic drums for their raw power and classic looks. But at the same time, we've come to expect help from technology in delivering the best sound to the audience. And that's where a hybrid kit – otherwise known as a setup that combines acoustic and digital elements – comes into play.

As anyone who plays drums live will know, it takes an army of microphones and an amplification system just to compete with the cranked-up guitar amps of your bandmates. Once you start to integrate other acoustic percussion – like shakers, tambourines and extra snares – your setup and sound requirements can start to get very complicated.

A hybrid kit could be the easiest and most reliable way to bring an extra dimension to your drumming. Not only does a hybrid setup minimise microphone requirements, it also improves sound quality. Hybrid drumming can also offer you countless adventurous new sounds and creative possibilities.

In this comprehensive guide to hybrid drumming, we'll explore the equipment and technology that you need to bring your drums to life. We'll also look at some typical hybrid drum setups, discuss the components needed and their settings, and explain how to get the best from your setup.

Hybrid drumming is a broad subject, but fundamentally there are three ways that you can use the available technology to improve your kit sound.

1 ENHANCE your acoustic kit sound

A well-tuned acoustic drum kit can sound fantastic, but the overall sound is dependent on many factors, including the room you're playing in and the drum heads you're using. Introducing acoustic triggers and a module like the Roland TM-2 to your setup means you can blend electronic tonal elements with your acoustic sound to ramp up the low-end of your kick, extract more attack from the toms, add extra crack to your snare and much more. In short, you'll have a full, clean drum sound every time you play.

2 LAYER acoustic and electronic sounds

Your acoustic drum kit remains at the core of your sound, but a second sound is layered on top via triggers and a module. The sound the module plays is entirely up to you – it could be a tambourine sample that sounds over your snare, or a big, reverb-drenched kick drum sample that triggers every time you play your compact 18-inch kick.

3 EXPAND the sounds at your disposal

Every now and then a song needs a sound that you might not have in your acoustic arsenal. It might be something simple such as a cowbell or clave, a second snare or china cymbal, or perhaps something electronic like an 808 kick drum or a vocal sample. A single electronic pad and module could solve all your problems — opening up a world of sonic possibilities to make you a versatile and indispensable drummer.

WHERE DO I START?

Now you know the three main things you can achieve by going hybrid, one of those is bound to excite you. So whether you want to Enhance, Layer or Expand (or maybe mix all three) the next step is to explore how your desired sound will be generated.
In the next chapter we will explore the different options available to you, while highlighting the differences between them.
One last thing to consider - before choosing the gear that provides the electronic part of your hybrid kit - is how to balance the electronic and acoustic sounds.

THE BALANCE OF ACOUSTIC AND ELECTRONIC SOUNDS

Your acoustic sound is a given, as you already have acoustic drums. You're already in control of that department by choosing the shells and heads that create your acoustic sound.
Amplifying your electronic sound is fairly simple – an output is taken from the sound module into the PA.
It's the balancing of the electronic and acoustic sounds that many drummers will need to figure out – and that largely depends on the venue and the stage set-up.

WHEN THE ACOUSTIC DRUMS ARE NOT MIC'ED

Hybrid is about acoustic and electronic sounds working together. But how does hybrid work if your acoustic drums are not amplified but the electronic sound is?
It's not essential that your acoustic drums are amplified through the PA to make hybrid work. In fact, in many cases, this is where hybrid set-up can benefit the drummer the most.
In small venues, where there are sometimes no mics on the drums at all, the acoustic drums will simply be heard in the room, without need for mics. The problem is that the drum sound lacks clarity and can be lost in the wash of guitars and vocals. Is this situation, hybrid can be used to enhance your drum sound by providing low end on your kick or extra body to your snare, booming through the PA system to cut through the guitarist-induced sonic haze.
Meanwhile, if you want a layered sound or an additional electronically generated sound (such as a sample, sub-drop, tambourine, shaker, extra snare etc) to be heard, a line out can be taken from the electronic module to the PA and the volume can be simply controlled so that the balance between the electronically triggered sound and acoustic drum sound is managed.

WHEN THE ACOUSTIC KIT IS MIC'ED

If you're lucky enough to play the type of gig where the entire kit is already mic'ed up, it's a simple case of blending the outputs of your electronic gear with the drum mics, via the front of house mixing desk.
If you only have mics on your kick and snare, or just overhead mics on the kit, you have some form of amplified acoustic sound – but the toms are lacking definition. In this scenario you can layer samples on the toms, giving the effect that they are amplified. Meanwhile the kick and snare can be consistent, powerful and punchy by adding electronic element sounds to enhance them further.
The layered or additional drum sound you want to play will simply be output from the sound module to the PA and blended with the drums mics coming into the mixer.

WHAT ABOUT MONITORING THE HYBRID DRUM SOUND?

We're going to explore this further on in this guide.


CHOOSING YOUR GEAR
ACOUSTIC &
ELECTRONIC
HYBRID DRUMS

SOUND SOURCES

Your electronically generated sounds can come from one of five main sources;

1 SAMPLE PAD

OVERVIEW

- Powerful sample player with integrated pads and 4GB internal memory
- Pre-loaded with a selection of drum and percussion sounds
- Sounds include acoustic samples, electronic sounds and vocal or melodic phrases
- The major benefit is that you can load and playback any sound or audio you like
- External pads or triggers can also be connected to play sounds

PRACTICAL USES

- Load in any drum sample and layer it over your acoustic sound
- Make your 18" dry bass drum sound like a 26" levee-breaks Bonzo kick
- Play a handclap, cowbell or tambourine
- Play live with audio, click tracks, backing tracks or any sound you can think of

Can be used to

ENHANCE **LAYER** **EXPAND**

2 TRIGGER MODULE

OVERVIEW

- Compact and battery powered sound module with jack inputs
- Can be included in your kit with minimum fuss
- Comes with many built-in drum and percussion sounds, from full acoustic samples to more basic tonal elements
- Trigger your own samples from SD card
- Triggers or pads need to be connected to play the sound

PRACTICAL USES

- Connect pad to TM-2 module to play any drum sound or sample that you want
- Fatten your kicks and make your snare truly crack by triggering extra tonal elements and mixing with your acoustic sound
- Layer an 808 snare over your acoustic snare

Can be used to

ENHANCE **LAYER** **EXPAND**

SOUND SOURCES

3 PERCUSSION PAD

OVERVIEW

- Percussion pad with 670 onboard sounds and 8 built-in pads
- Sounds include authentic drum, percussion, bass and even melodic sounds
- Create percussion loops and rhythms on the fly with built-in looper
- Connect triggers, footswitches and pads to play internal sounds or start loops
- Dedicated hi-hat input with hi-hat foot control for realistic performance

PRACTICAL USES

- Place next to your kit to play one-shot sounds
- Create a bass, melodic or percussion loop and then play along with your kit
- Connect triggers to layer any of the internal sounds over your acoustic drums

Can be used to

ENHANCE **LAYER** **EXPAND**

4 DRUM MODULE

OVERVIEW

- Connect any Roland V-Drums module past or present to drum pads or acoustic drum triggers
- Internal drum sounds can be tuned or edited in the module
- Sounds can be layered onto your acoustic drums or a pad can play any internal sound
- The number of pads and triggers you can connect varies depending on module specification

PRACTICAL USES

- Connect pad to module to play any internal drum sound you want
- Edit an internal sound to match the pitch and tone of your acoustic drums and layer the sound on top for an almighty drum sound
- Have a consistent kit sound at every gig you play

Can be used to

ENHANCE **LAYER** **EXPAND**

SOUND SOURCES

Acoustic & Electronic Hybrid Drums

5 SOFTWARE

OVERVIEW

- Sounds and samples live entirely within the computer
- A trigger interface is required between the computer and the trigger or pad that you hit
- Any Roland drum module or percussion pad with MIDI can be the interface
- There is a risk of increased latency between hitting the pad and hearing the sound - depending on computer, software and connections

PRACTICAL USES

- Any sound or audio file within the software can be triggered
- Sequences can be triggered; each time you hit a pad, a different sound is played from a pre-set sequence

Can be used to

ENHANCE **LAYER** **EXPAND**

SO WHICH SOUND SOURCE DO YOU CHOOSE?

Now we know where your hybrid sound can come from and the differences between each source, use the questions below to work out which might be best for your needs:

- Do you want to enhance, layer or expand - or a mix of all three? The key next to each sound module tells you which can jobs it can handle.
- How many pads or triggers do you need? If you want to trigger kick, snare and 3 toms you you'll need something with 5+ trigger inputs. If just a couple of pads or triggers are needed, the TM-2 trigger module or SPD-SX sampling pad would suffice.
- Do you need to import samples or audio files? Using your own samples always sounds appealing - but it's only practical if you know how to make them or find them easily. If you only need drum sounds, consider using many of the high-quality and dynamic sounds pre-installed in a Roland drum module or SPD-30 Octapad. If you absolutely need to use your own samples or audio files, the SPD-SX or TM-2 are the modules for you.

SOUND SOURCES

THE DIFFERENCES BETWEEN SAMPLES AND THE SOUNDS ALREADY INSIDE A DRUM MODULE

Sample players generally allow you to load any sound - a vocal phrase, for example - and then trigger it. The sample can be triggered at different volumes (i.e. quieter or louder) depending on how hard you hit the pad, but the sound will only ever be one-dimensional. For example, a sample of snare drum will only capture the hit of the snare at one moment in time. The sample can't be a fully expressive and dynamic representation of all the tones and textures you can get from that snare drum.

Whereas the sounds inside a drum module such as the TD-30 or TD-25 are fully expressive and dynamic representations of a snare drum, a kick drum, a crash cymbal and so on. Not only will you be able to play each instrument at a variety of volumes, but the whole tone and character of the instrument will change as you play it.

HERE'S A QUICK COMPARISON OF THE PROS AND CONS OF SAMPLES VS SOUND MODULES

Samples

PROS

- Samples are ideal if you want the exact sound from an original recording
- Samples are more consistent, as the exact same sound is triggered each time

CONS

- Samples are generally single-sound snippets that don't change character depending on the velocity – so they can sound one-dimensional
- Samples can suffer from latency (depending on how fast the system can play them back)

Sound modules

PROS

- Sounds from a sound module can vary in character depending on how they are played
- They have lower latency and faster response, dependent only on the processor speed
- Depth, size, pitch and many other parameters (right down to skin and microphone type) can be modified, allowing many sound design possibilities

CONS

- Sounds have to be manually modified to imitate the original (for example, from a record)
- Sound modules are generally more expensive than pure sample players as there is more technology involved

TRIGGERING THE SOUND

Now you've chosen where your sound will come from (sample player, sound module or percussion pad), you need to choose how to trigger it. Roland's pads and cymbals are the most advanced available. They're also the most durable, which is important for something that will be hit for several hours a day. Here are the main pad and cymbal types, along with their specialities.

V-PADS

- Trigger pads generally range in size from 6”to 14”
- Can have multiple trigger zones for edge and head triggering
- Pads offer positional sensing capabilities when used with the TD-12, TD-20, TD-30 and TD-25 modules
- Rubber and tension-adjustable mesh are the most common surface materials
- Will mount to conventional rod-type tom holders and Pearl tom holders*

(*check specifications of pad first)

CRASH & RIDE V-CYMBALS

- Crashes and rides range from 5" to 15"
- Can have multiple trigger zones for bow, edge and bell triggering
- When connected to a V-Drums module V-Cymbals can be choked (or muted) by grabbing the cymbal's bottom edge
- Available in standard black rubber or metallic grey
- Using a CYM-10 adaptor, V-Cymbals can be mounted on conventional cymbal stands and boom arms*

(*not all brands of cymbal stands or cymbal arms will fit the CYM-10. Roland's MDY-12 can also be used to mount V-Cymbals)

V-HI-HAT

- Top hat features bow and edge triggers with edge muting
- Natural weight and closing action
- Very smooth transition between fully open and fully closed positions
- VH-11 and VH-13-MG models mount on a conventional hi-hat stand

PADS, TRIGGERS & CYMBALS

Below are some of the most popular trigger types and their specialities. Note that they all integrate piezo and/or FSR sensors – this allows any trigger type to trigger any sound in the sampler or module with one or more trigger inputs.

V-KICK PADS

- Available in sizes up to 14”
- Rubber, cloth or mesh pads available
- Tension-adjustable mesh kick pads are mounted in a shell with conventional bass drum spurs and exchangeable shell wraps
- Can be used with conventional acoustic kick pedals - use your preferred pedal
- Space-saving KD-7 and KT-10 models are ideal for hybrid setups

BAR TRIGGERS

- Ideal for easy placement in tight setups
- Can be attached to the tension lugs of drums or onto conventional tom holders with rod attachment
- Specifically designed to avoid false triggering from sympathetic resonance or vibration

ACOUSTIC DRUM TRIGGERS

- Triggers a sound from the module by hitting the acoustic drum
- Acoustic triggers can be used to enhance or reinforce the natural drum sound, in a similar way to using a microphone. They can also be used to trigger completely new sounds to layer on top of the acoustic sound for two distinct tones in one hit
- Attaches to the hoop of any acoustic shell, with a sensor that rests on the batter head
- Dual and single input versions available
- Dedicated versions for mounting to a kick drum

CONTROLLERS: HI-HAT & FOOTSWITCHES

It's best to think of foot controllers as switches to help you control functions, rather than triggers to play a sound. Here we introduce some of the best-known Roland units – and explain how you could incorporate them into your drum setup.

FD-8 AND FD-9 HI-HAT CONTROLLERS

Hi-hat controllers are used to open and close hi-hats, recreating the feel of a conventional hi-hat pedal and acoustic hi-hat combination. Foot controllers connect to the HHC (or hi-hat control) input of a V-Drums module or SPD-30 Percussion Pad – rather than the trigger input for triggering sounds.

BOSS FS-5U, FS-6. FS-7 FOOTSWITCHES

Footswitches connect to the 'Foot SW' input of the sound module and are a convenient hands-free way to switch kits in the sound module or turn features on/off. They're available in a single or twin switch formats.

A footswitch could be assigned to turn a reverb effect on/off, or to start/stop a backing track, sequence or pattern. It could even be used to throw the virtual snare strainer off and on when used with the TD-30 V-Drums module – in the same way that you would operate the snare throw-off on an acoustic snare.

POWER-USER TIP

It's possible to trigger a sample or backing track from a footswitch connected to the SPD-SX Sample Pad. You can also use them to start or stop a loop in the SPD-30 Percussion Pad. This can be useful for expanding your setup with extra sounds and live performance options.

SETUP 1: ENHANCE

Lower kicks, deeper toms, fatter snares

Now you've seen the key equipment involved, let's take a closer look at three typical acoustic/electronic setups that use sound sources, triggers and footswitches.

TM-2 TRIGGER MODULE

The TM-2 has *element* sounds inside - the low-end of a kick drum, or the biting overtone of a snare. These 'elements' are triggered and mixed with the acoustic drum resulting in a bigger, more powerful drum sound.

RT-30HR ACOUSTIC DRUM TRIGGER

This dual-trigger allows one sound to be triggered from the head and another sound to be triggered by the rim. The RT-30H single trigger can also be used to trigger a sound from the drum head only.

USE YOUR OWN SAMPLES

Drop your own samples and WAV files onto an SD card, so they can be triggered from the TM-2.

POWER-USER TIP

Sharp 'clicky' *element* sounds work well when you need a super-snappy and consistent kick sound with reduced dynamics for fast double kick playing

RT-30K ACOUSTIC KICK TRIGGER

This single trigger is adapted specifically to fit the hoop of an acoustic bass drum. It triggers a sound from the drum head, but also has clever sensing technology which prevents mis-triggering.

SOUND OPTIONS

You can use the SPD-SX instead of the TM-2 to enhance your drum sound. If you want to create your own *element* sounds and trigger them with your acoustic drums, samples and WAV files can be loaded into the SPD-SX. Nine built-in pads give the flexibility to trigger extra sounds from the SPD-SX - all at the touch of a stick

SETUP 2: LAYER

Layer electronic samples over acoustic sounds

RT-30 SERIES ACOUSTIC DRUM TRIGGERS

Acoustic triggers bring together the worlds of electronic and acoustic drums. Any acoustic drum can be used to trigger sounds from any Roland drum module, percussion pad or sample pad. It's a simple way to transform your drum sound during a live gig or in the recording studio

SOUND OPTIONS

Any Roland drum module, trigger module or percussion pad can provide layer sounds. For example, you might choose to attach a kick trigger and dial up a classic Roland 808 kick and blend it with your acoustic kick sound for a powerful and punchy electronic-style kick sound. Want a 60s style snare sound? Layer a tambourine sound onto the acoustic snare head for a backbeat full of soul.

POWER-USER TIP

Snare sounds also benefit greatly from triggering – for example, if you need to transform a dry-sounding fat snare into a piccolo with overtones. Adding a snare rattle to simulate the bottom microphone often missing from a live drum kit setup can work wonders, producing a larger-than-life, studio-quality snare sound.

SETUP 3: EXPAND

Expand your kit with instruments, effects and samples

BT-1 BAR TRIGGER

A bar trigger is an ideal addition when space is limited. It can adapt to fit to the tension rod of a snare or tom, or can fit to a rod-type tom holder.

ADDING A PAD

Placing a V-Pad to the side of the hi-hat is a good position for second snare and percussion sounds. You could choose to assign adventurous sounds to the rim and head of the trigger pad, or you can complement your acoustic sound with simple instruments like cowbell, tambourine, shaker, splashes and more.

SOUND OPTIONS

Any Roland drum module, trigger module or percussion pad can provide layer sounds.

SPD-30 OCTAPAD

The SPD-30 has hundreds of authentic drum and percussion sounds inside. Each one can be edited and tweaked by altering the tuning or adjusting the tone. Connect external pads to play the internal sounds.

POWER-USER TIP

The addition of a module and trigger pad is a simple and discreet way to add more sound choices into your acoustic setup. It's simple to get up and running, takes up minimum space in the kit and is highly effective

KT-10 KICK TIGGER PEDAL

Low noise trigger pedals like the KT-10 or KD-7 are a great way to expand a setup and trigger sounds with the feet. Connecting these pedals to the SPD-SX or SPD-30 allows quick and easy playback of extra sounds, loops or samples by using your feet.

SETUP 4: CONVERT

Convert your acoustic heads to mesh heads
Fit mesh heads & triggers for an electronic kit with acoustic appearance

ACOUSTIC & ELECTRONIC HYBRID DRUMS

Technically speaking, this is a hybrid set-up in looks only. We're not using any sound from the acoustic drums in this example. Instead, Roland Powerply mesh heads replace the acoustic batter heads for an ultra-quiet hit. Acoustic drum triggers are then mounted to the batter heads, which trigger a sound from the V-Drums module you've connected.

ROLAND POWERPLY MESH HEADS
Available in all standard drum sizes from 8-22", they're a fast and effective way to convert any standard drum setup into an electronic drum kit while keeping the looks and feel of your acoustic set-up.

CYMBAL CHOICE
Freely combine both acoustic and V-Cymbals for the widest possible range of textures and sounds.

SOUND OPTIONS
A V-Drums module is the best choice here for fully expressive, dynamic drum and cymbal sounds. An SPD-SX sampling pad or TM-2 trigger module can be added to the kit for unlimited sound choices.

POWER-USER TIP
Attaching triggers to these near-silent, tension-adjustable heads reduces kit volume levels dramatically and avoids the need for microphones. It's a great option if you want to retain the acoustic vibe, while benefitting from electronic features.

USING THE GEAR

ACOUSTIC & ELECTRONIC
HYBRID DRUMS

SETTING UP THE GEAR

We've explored what you can achieve with a hybrid drum set, the various options for hybrid sound, the options for triggering and playing sound and even looked at some example set-ups. Now you know what to use, we can explain how to use it. In the following sections, we'll look at setting up your equipment and some troubleshooting advice.

WILL ACOUSTIC DRUM TRIGGERS WORK WITH ALL ACOUSTIC DRUMS?

Traditional wooden drums come in many sizes and are made from a range of different materials, including wood, various metals, fiberglass, acrylic plastic and even compressed pulp wood. These various materials all affect trigger response, but the any Roland sound module can easily be adjusted to compensate.

WILL RT-30 ACOUSTIC TRIGGERS FIT ALL ACOUSTIC HOOPS?

Drum hoops can vary wildly - from vintage cast hoops to modern steel hoops with an inward flange or curve, deep hoops, shallow hoops and more. The RT-30 series of acoustic drum triggers are designed to fit the widest range of hoops, from triple-flanged to die cast and even inward flange. The self-guided mount automatically sets the sensor in the optimum position against the drum head, without fussy mechanical adjustment.

POWER USER TIP

If you have V-Cymbals in your kit, use the supplied CYM-10 cymbal adapters. These fit to the thread of most acoustic cymbal stands and cymbal arms and prevent the cymbals from spinning on the stand. You will need to remove the nuts, felts and stoppers from the thread first and replace them with the CYM-10 adapters before mounting your V-Cymbal.

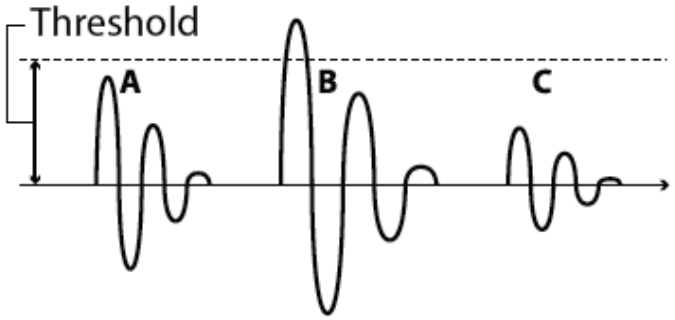
Let's look at the parameters that most dramatically affect trigger response - understanding these settings will allow you to tailor your hybrid set-up to your playing and music style.

TRIGGER TYPE

Cymbals, pads and acoustic triggers are all very different in their construction and how they are played. As a good starting-point for your setup, it's vital to go into the module settings and select the trigger type you are connecting. It's not as difficult as it might sound - all Roland triggers have the model name printed on the unit, and every model is already pre-set in each module. It's simply a case of connecting the pad to the trigger input, hitting the pad and selecting the correct model as your trigger type. Choosing an appropriate trigger type will ensure that the optimum parameters will already be chosen for you, and only small changes will be necessary for optimum trigger response.

THRESHOLD

The threshold setting determines the trigger's minimum sensitivity setting. This setting allows you to adjust how hard you need to hit the drum or the pad before it responds.



SENSITIVITY

This setting controls the responsiveness of the trigger. Higher trigger sensitivity allows the sound module to produce louder sounds, even when played softly. Lower trigger sensitivity produces a lower volume level from the sound module, even when played forcefully. A standard pad sensitivity setting of 9 may be typical for a kick trigger used in general pop music. Meanwhile, a setting as high as 32 may be more appropriate for a metal drummer's kick trigger, where less dynamics are required.

Next, we'll explain why velocity curves are important if you want a dynamic drum sound.

POWER USER TIP

With the TD-30 V-Drums module, you can create and choose typical trigger setups by saving them as a trigger 'Bank'. This makes it easy to instantly switch between different trigger types and settings for your live and studio kit setups. With other modules, simply save all your trigger settings as a different BACKUP file and give name, eg: Live Backup, Home Backup. Your various trigger settings can then be loaded into the module at any time

BASIC TRIGGER SETTINGS

The curve shape affects how the trigger responds to hits from low to high velocity.
Here are the typical velocity curve shapes.

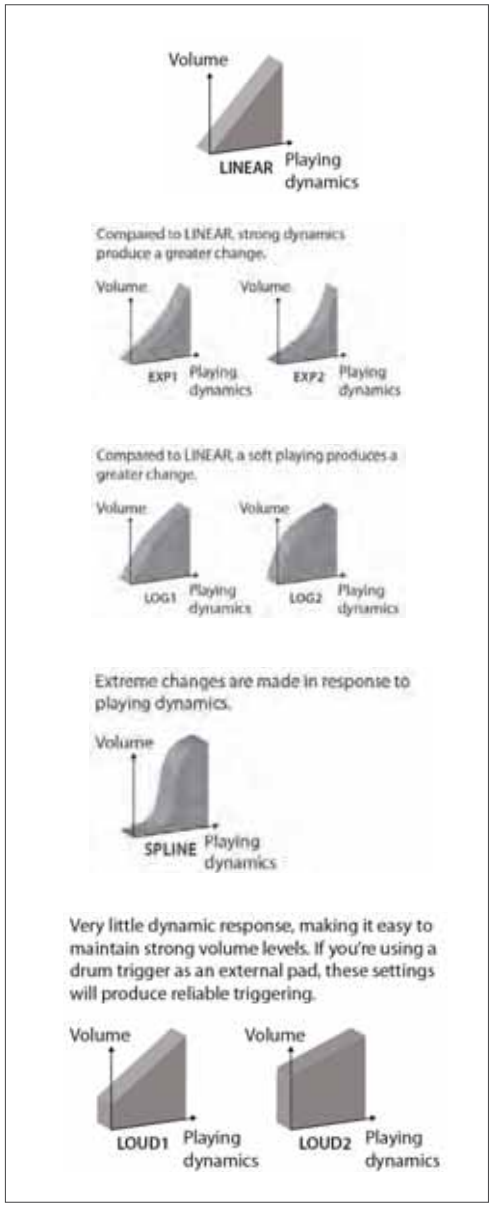
LINEAR
This standard setting produces smooth response from low to high velocity and is a good first choice for natural trigger response.

EXP1 & EXP2
Exponential curves produce more gradual changes in trigger response. These modes can be useful for dramatic and dynamic playing.

LOG1 & LOG2
Dynamics are reduced with these curve shapes. These modes can really help get a more consistent kick drum trigger and also make soft 'ghost notes' louder to cut through the music.

SPLINE
The spline shaped curve is a combination of EXP2 & LOG2 producing extreme changes in response through the velocity range. This shape can be interesting for quick swells with cymbal triggers or when a more dramatic switch between soft and loud sounds is required.

LOUD1 & LOUD2
Loud curve shapes are ideal for metal drummers playing fast double kick patterns where intense and heavy kick drum sounds are required even though the hits themselves may be quite light and just 'feathering' the kick pedals. Electronic sounds used in dance music where little or no dynamics are required in order to simulate a drum machine also benefit loud curve shapes. These shapes provide strong consistent triggering suited to certain types of aggressive sounds and styles of music where every note needs to be equal volume.



AMPLIFYING & RECORDING A HYBRID KIT

If you've created a hybrid acoustic/electronic setup, you'll want both elements to be clearly heard, whether you're playing onstage or in the studio. The aim for the hybrid drummer is to create a seamless blend between the two worlds, for both the audience and other band members, on a recording or during a live performance.

STAGE

Conventional microphones are used to capture your acoustic drums and cymbals. Electronic instruments, on the other hand, are plugged into direct injection boxes (DIs), so they can be connected to a stage box and sent out to the front-of-house mixer and amp system.

In-ear monitoring is the ideal way to keep track of your live sound. If that's not available, then a pair of powered wedge speakers placed either behind the drums or in front of the kit (left and right) can help give a good blend of both electronic and acoustic sounds.

Another good option for live drummers is to send your sound out to the monitor mixer on stage – where it's then sent to the other band members to hear.

For instant monitoring, connecting your in-ears or monitor directly to the sound module outputs will give you the best playing experience and detailed control of your levels in the heat of the performance.

STUDIO

If you use a powered speaker to monitor the electronic sound output in the studio, there is a good chance the amplified sound will be picked up by the microphones on the drums.

For a clean mix and a higher-quality recorded sound in the studio, you'll need to reduce the overspill of electronic sounds into the drum microphones. The best way to achieve this is to use in-ear monitors, and listen to both the electronic elements and the acoustic drums through the headphones.

POWER-USER TIP

For unlimited sound choices when mixing – plus the ability to substitute or enhance acoustic sounds – take the MIDI out from your drum modules and record it along with the stereo audio output from the module. This gives you the opportunity to re-play the MIDI recording via the module, adjust, change or tweak the electronic sound and re-record it once again. This way, you won't need to re-take the entire performance again and the electronic track will be in sync!

SAVING YOUR CUSTOM SETUPS

After putting effort into creating your very own custom setup, finding and fine-tuning the sounds you want to play, the last thing you want is to lose your settings and have to start all over again. There are quick and easy ways to ensure this never happens. While it's a good idea to check your specific model for details, here are some typical ways of saving your setups.

Saving SPD-SX & TM-2 sounds and settings

SAVE-KIT & SETTINGS

This saves a small configuration file, capturing settings like the sounds assigned to specific pads and their kit names. The file can also include system settings such as MIDI channels, pedal modes, volume and EFX routings.

ALL

This option saves a large 'Backup' file of your module onto SD card or USB. This complete backup includes all system settings and the sounds themselves, so make sure you have enough space on the stick or card. This form of backup is the safest method for ensuring all your settings and sounds are safe. Once saved, keep it safe in case you need it.

V-Drums Modules With Memory Storage

BACKUP

This creates a backup of all trigger settings and all sounds. Each backup can be named so you can even have backups for different bands or different sets. When you save settings on sound modules, the backup files are usually quite small, as they contain no sounds but rather the configuration information itself.

KIT SAVE

The KIT SAVE option saves a single kit configuration. Depending on the specific module, this might include the name of the kit, sound assignments and volume levels of the different instruments (among other settings).

HYBRID TROUBLESHOOTING

Follow our guide to solving some of the most commonly encountered issues when using hybrid in live environments. There are three things to check on your acoustic drums before fitting acoustic drum triggers.

Prepare your acoustic drums

HEAD TENSION

- If the head is very loose there is a high chance that the head will not activate the trigger sensor. Make sure the tension amount is even at each tension rod and also ensure the head is at least tensioned enough to be free from crinkles. Slightly higher-than-usual tension will help maintain with consistent triggering.

DRUM DAMPING/MUFFLING

- Occasionally, the frequencies from a drum head are sufficient to cause vibration and disturbance to the triggering. Adding a small amount of damping – such as moon gel – can solve the issue

ACOUSTIC DRUM SOUND

- Hybrid is about acoustic and electronic sounds working together. Make sure your acoustic sound is in order – the electronic sounds won't make a poor acoustic sound better! Know how to tune your drums and use good quality drum heads that are not past their best.

Retriggering

- Retriggering is when a second sound is played, even though you hit the drum once. It can be caused by vibration, by a loosely tensioned drum head or my positioning of the trigger sensor.
- Adding some damping to the drum (such as tape, moon gel or felt under a kick drum batter head) can resolve the issue.
- Inside a module, the 'Re-trigger cancel' function can electronically reduce the re-triggering effect. Increasing the re-trigger cancel amount in the module's settings will help.
- There is a trade-off – the responsiveness of the electronics or the acoustic sound could change. Normally, it's possible to find a happy medium by adjusting a mix of damping and re-trigger cancellation.

HYBRID TROUBLESHOOTING

Cross talk (when hitting one drum triggers an adjacent drum)

- If you're a hard hitter, it is possible that one drum can set of another. This is called false triggering, or cross talk.
- If drums are touching one another or even close together, the vibration can cause a trigger on the next drum to be activated.
- Adding damping to the drum can help significantly such as tape, moon gel, an o-ring or foam/felt in the kick drum
- You can move the drums slightly further apart – for example if your highly tuned 10" tom is setting off the snare, moving by just a few centimetres can make a difference
- You can increase the THRESHOLD setting in the module. However the trade-off here is that some dynamics of the electronic sound, such as ghost notes, may not be detected


YOUR SOUND. NO LIMITS.
ACOUSTIC & ELECTRONIC
HYBRID DRUMS