Crumar Sorrento

COMPACT ORGAN WITH ROTARY EFFECT PEDAL

USER'S MANUAL

Congratulations on your purchase of the Crumar Sorrento! The Crumar Sorrento is a modern classic, crafted with cutting-edge technology while delivering the authentic feel and sound of a true vintage organ. We wish you many years of enjoyment and great music with your new instrument! Be sure to read through this manual to discover all its features and, most importantly, have fun!

SAFETY AND WARRANTY INFORMATION

- Do not open the instrument. The instrument can be opened and repaired only by qualified personnel. Unauthorized opening voids the warranty.
- Do not expose the instrument to rain or moisture or direct sunlight.
- Be careful not to infiltrate powders and liquids inside the instrument. Nor on the outside.
- If liquids get inside the unit, remove the power immediately to prevent the risk of electric shock and contact a service center as soon as possible.
- Do not clean using abrasive cleaners as they may damage the surfaces.
- Please keep all packaging in case you need to transport the instrument to a service center.
- The instrument can be used in any Country that has a mains voltage between 100 Vac and 240 Vac.
- The paint job is subject to wear and is not covered by this warranty.
- Crumar Sorrento is subject to 12 months manufacturer's warranty.
- Warranty extensions are at the discretion of the retailer.
- Damages caused by misuse, improper maintenance or transportation are not covered by this warranty.
- During the warranty period, the customer is entitled to repair or replacement of any parts considered defective at no charge.
- The possible replacement of the entire product is at the manufacturer's discretion.

CHAPTER SUMMARY:

IMPORTANT NOTES ABOUT THIS MANUAL

This manual should be considered a living document, as it may be updated over time to reflect changes introduced in future firmware releases. We recommend regularly checking the Support section of the Crumar website for the latest versions of both the manual and the instrument’s firmware.

This manual is not intended to replace the Quick Guide, but rather to complement it. While the Quick Guide provides a concise overview, this manual offers more in-depth and technical explanations on topics such as sound design, connectivity, editing options, and the modular architecture of the Sorrento. Please make sure to read and understand the Quick Guide before proceeding with this manual.
For the best experience, we recommend reading this manual with the instrument in front of you, so you can immediately apply what you learn and experience the features firsthand.

1. INTRODUCING THE CRUMAR SORRENTO

The Crumar Sorrento is the result of years of research and development and, when it comes to electronic organs, we have plenty of experience! From the VB3 software to the Mojo line and the Gemini, we've long been dedicated to capturing the soul of classic organ sounds. With the Sorrento, we felt it was time to pay tribute to a remarkable yet often overlooked chapter in music history.

Crumar Sorrento is a modern reinterpretation of the iconic 1970s spinet organ, designed for musicians who love vintage aesthetics and sound, but also want the convenience and power of modern technology.

It features two 49-note synth-action keyboards, carefully calibrated for organ performance and equipped with octave shift functionality. This allows for full console-style playing in a more compact and lightweight design. Everything you'd expect from a full-size console organ, you can now do with the Sorrento, at just a fraction of the weight.

Onboard, you'll find three distinct organ engines:

- A warm, full-console tonewheel emulation.
- A classic spinet-style tonewheel sound inspired by legendary rock and progressive bands of the 1970s.
- A gritty, character-rich transistor organ voice.

Additionally, the Sorrento includes a monophonic synthesized bass sound, enabling full-range performance right at your fingertips.

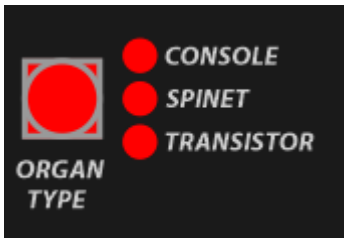
MAIN FEATURES

- Dual Manual Organ with two 49-note synth action semi-weighted velocity sensitive keyboards.
- Physical modeling tone-wheel and transistor organ synthesis.
- Physical modeling bass synth sound generator with volume, tone and decay controls.
- Fully analog distortion circuit with level, drive and tone controls.
- Ring modulator.
- Limiter.
- 9 Real Drawbars.
- Knobs for Volume, Key-click, Percussion Volume and one assignable.
- Dedicated buttons for Vibrato on/off and type.
- Two drawbars presets per manual with easy storage mode.
- Bass to lower function (For playing the Bass synth with the lower manual).
- Built-in editor with OLED display and navigation buttons.
- MIDI IN and OUT connections.
- USB Type B (device) for MIDI IN/OUT.
- Three mono audio outputs: ONE-CORD to connect the instrument to its Burn rotary simulation pedal, one main out and bass out.
- Expression pedal input.
- Sustain pedal input.
- direct AC in plug 100-240V (no external power supply unit).

WHAT'S IN THE BOX

- Crumar Sorrento Spinet organ.
- Crumar Burn reverb and rotary simulation pedal.
- Power cables, ONE-CORD cable, Quick Guide.

2. SOUND AND ONBOARD EFFECTS



Crumar Sorrento is able to replicate the sound of three iconic electronic organs of the past:

1. Full tonewheel console organ.
2. Spinet tonewheel organ.
3. Spinet transistor organ.

To select the three different sounds, just push the button labeled "ORGAN TYPE" in the lower control panel.

Tonewheel vs Transistor Spinets

The difference between a transistor spinet and a tonewheel spinet lies solely in how the tones are generated: either by rotating tonewheels or by electronic transistor circuits. Transistor spinets typically produce a more *acidic* and *cutting* sound compared to their tonewheel counterparts.

Console Organs vs Spinet Organs

Unlike the simple tonal distinction above, the difference between console organs and spinet organs involves a combination of ergonomics, circuit design, and overall layout. In original tonewheel organs, the number of keys and drawbars was closely tied to the generator architecture and internal circuitry.

Many different spinet models were produced over the years, often with significant differences between them. What follows is a general overview rather than a description of any specific model.

Console Tonewheel Organs typically include:

- 91 tonewheels.
- 2 manuals with 61 keys each.
- 4 groups of drawbars for the manuals, plus 2 for the pedalboard.
- A 25-note pedalboard.
- Mechanical vibrato scanners.

Spinet Organs usually have:

- 87 tonewheels (the missing 4 affect the lower bass range).
- 2 manuals with 44 keys each.
- A 13-note pedalboard.
- Either mechanical or electronic vibrato, depending on the model.

One of the most significant differences - beyond sound - is the absence of full *foldback* functionality in spinets. While each key on a full console organ typically has 9 contacts beneath it, spinet organs often reduce this number on the upper part of the keyboard (starting from F# upwards). This means certain notes do not trigger all harmonic drawbar contacts, resulting in slightly altered tones - sometimes scratchier, sometimes softer.

Historical Background

Originally, console organs were designed for permanent installations in churches or theaters, while spinets were intended for home use. However, with the rise of rock and pop music, spinet organs became popular thanks to their smaller size, lower weight, and portability. This demand led to the development of fully portable organs during the 1970s - and also to the birth of transistor-based organs for even greater weight reduction. Eventually, the advent of digital technology changed the landscape entirely.

Console Mode

When set to *Console Mode*, Sorrento behaves just like a traditional full console organ:

- Full drawbar functionality.
- Percussion and vibrato circuits.
- Authentic tonal behavior.

Although Sorrento has 49 keys per manual (one octave fewer than a full 61-key manual), it features two dedicated buttons:

- One for transposing the *upper manual* down an octave.
- One for transposing the *lower manual* up an octave.

  This allows for full-range console-style playing in a compact format.

Spinet Modes

In either of the two *Spinet Modes*, Sorrento emulates the sound and behavior of spinet organs:

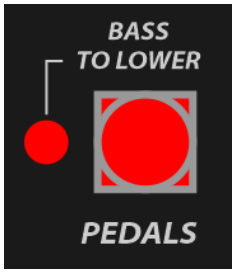
- A distinct tonal character.
- Electronic-style vibrato.
- Authentic drawbar response matching spinet architecture.
- Modified percussion behavior.

Three harmonics are available for percussion: **second**, **third**, and **fifth. T**hese can also be activated simultaneously to create unique, layered tones only achievable on certain spinet models. A dedicated *Percussion Decay* button allows further customization.

Additional Controls

- Dedicated controls for **keyclick** and **percussion volume** are always available on the control panel.
- A freely assignable knob is preconfigured to control the **ring modulator** by default.
- The **VOLUME** knob is a true analog control and **does not send MIDI messages**.

To round out your performance, a dedicated synth bass sound is always available.



You can play it using a MIDI-connected pedalboard—such as our Mojopedals—or, alternatively, by enabling the **BASS TO LOWER** function, you can assign the bass sound to the lower manual.

Adjusting the Synth Bass Sound

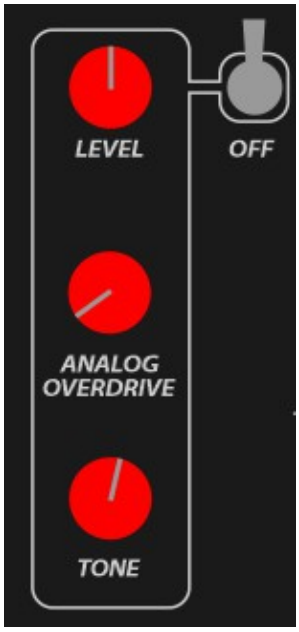
When you press the **PEDALS** button, the drawbars are repurposed to control the parameters of the synth bass sound:

- **Drawbar 1** controls the *volume*.
- **Drawbar 2** adjusts the *tone*.
- **Drawbar 3** sets the *release time*.

To activate the bass sound on the lower manual, hold the **PEDALS** button until the **BASS TO LOWER** LED turns on.

Please note that the Sorrento's bass synth engine is *monophonic*.

Analog Distortion Circuit



Sorrento features a true analog distortion circuit, inspired by classic guitar distortion pedals. It includes:

- An **ON/OFF** switch.
- A **Tone** control.
- A **Drive** knob to adjust the amount of distortion.
- A **Level** knob for the overall output volume.

These controls are part of the analog signal path and **do not send MIDI messages**.

Ring Modulator and Assignable Control

A **ring modulator** is an audio effect that combines two input signals by multiplying them, resulting in complex, often metallic, robotic, or bell-like sounds.

On the Sorrento, the **assignable knob** on the control panel is, by default, assigned to control the ring modulator.

Using the software editor (see Chapter 4), you can reassign this knob to control other parameters.

Please note: **this knob sends MIDI messages only when assigned to the ring modulator.**

3. CONNECTION CAPABILITIES AND MODULARITY - CRUMAR BURN

Sorrento also features high-quality **rotary speaker simulation** and two types of **reverb effects**: **spring** and **digital**.

These effects are not directly controlled from the instrument's main panel. Instead, they are managed via its dedicated **rotary pedal unit**—the **Crumar Burn**, which is an integral part of the system.

The Importance of Reverb and Rotary Speaker Simulation

What would an organ sound like without reverb and rotary speaker simulation? These two effects are essential to the classic organ sound and are included in the Sorrento. However, instead of integrating them directly into the instrument, we chose a different, more modular approach.

In the past, rotary speakers were separate amplifiers, external to the organ itself. Depending on the music style, they were sometimes optional accessories.

This is where Crumar Sorrento's modular design comes into play! The rotary speaker simulation and reverb effects are contained within a dedicated effects pedal called **Crumar Burn**. Think of Burn as a dual footswitch pedal designed for effect control, but unlike passive footswitches, Burn is an active device. This setup mirrors classic spinet organs, where a dual-rail rotary pedal controlled the rotary speaker speed.

Beyond speed control, Burn offers additional features including: front stop, memphis style rotary effect, balance control, choice between digital and spring reverb and much more.

Burn connects to Sorrento using a special cable, the **ONE-CORD connection**. This manual will explain the ONE-CORD system and its functions in detail later. For more specific information about Burn and how to use it, please refer to its dedicated Quick Guide.

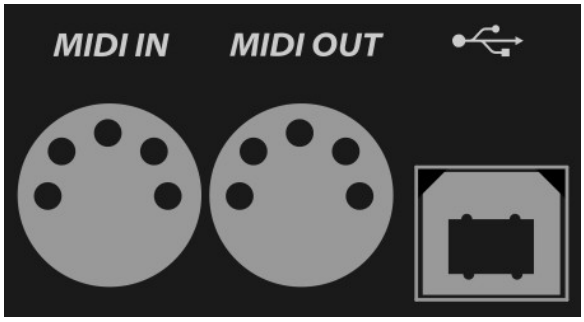
PLEASE NOTE: in some situation, the ONE-CORD connection can introduce noise in the audio signal. In order to get rid of them, a separate power supply for Burn is required. Crumar Burn uses a 9v 300mA PSU with negative center, very common for guitar effects.

PLEASE NOTE: Crumar Burn is an effect pedal and the logical position for it is on the floor operating the switches with your feet. But, in case you want to have the unit on top of Sorrento, you can still use the two footswitches and operate them with your hands because they are very soft. If you would like to control the unit with a separate device, Burn has a TRS plug on the right side. It is compatible with our HMS-20-BK halfmoon unit but Sorrento doesn't have any mechanical support or screws where you can attach the halfmoon, because the shape of the instrument doesn't allow it. You can find a DIY solution that can be, for example, using velcro. You can also plug there an external footswitch: please check the support section of www.crumar.it to have access to the schematic for this specific footswitch that uses latched switches.

Connections Overview

Now, let's explore the connections on Sorrento and what you can do with them, along with some practical examples. This section focuses on MIDI and audio connections; for basic setup information, please see the Quick Guide.

MIDI Connections



Sorrento offers three MIDI ports:

- Standard 5-pin **MIDI IN.**
- Standard 5-pin **MIDI OUT.**
- **USB MIDI** supporting both input and output.

Use the **MIDI IN** port to connect devices such as our Mojopedals. Power-over-MIDI is supported here, so external pedals can operate without a separate power supply. Naturally, any MIDI device sending data on the correct channel and message type can be connected to Sorrento. The instrument will respond accordingly.

A common use case is connecting a MIDI keyboard controller to the MIDI IN port to play only the synth bass sound.

The **MIDI OUT** port transmits MIDI messages from Sorrento to external devices, enabling you to control other instruments or sound modules with Sorrento's keyboards.

Use the **USB MIDI** port to connect Sorrento to a computer for software integration.

Note that MIDI message behavior can be configured via the editor software, explained in a dedicated chapter.

Audio Outputs

Sorrento has three unbalanced mono audio outputs, all usable simultaneously:

- **MAIN OUT.**
- **ONE-CORD TO FX.**
- **BASS OUT.**

The **MAIN OUT** and **ONE-CORD TO FX** outputs carry the same audio signal, including both organ and synth bass sounds.

When a jack cable is plugged into the **BASS OUT** output, the bass synth sound is automatically removed from the MAIN OUT and ONE-CORD TO FX outputs, routing it exclusively to BASS OUT. This allows you to connect the bass sound directly to a dedicated bass amplifier.

The ONE-CORD Connection

What exactly is the ONE-CORD connection? It's a modern reimagining of the classic multi-pin rotary speaker connection used in the golden era of electronic organs. Back then, special multi-pin cables connected the organ to the rotary amplifier, which didn't require a separate power line since power and audio traveled through the same cable.

We adopted this concept for Sorrento and Burn: the ONE-CORD cable carries both the audio signal and the power supply for the Burn pedal.

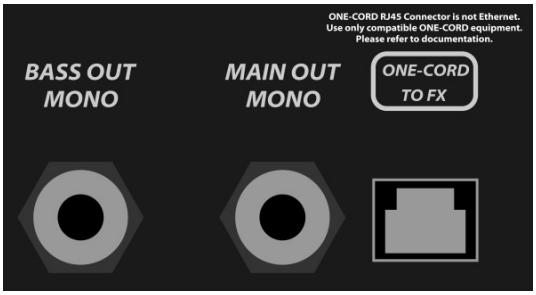
Advantages of the ONE-CORD System

The ability to use the ONE-CORD output and the MAIN OUT simultaneously offers versatile setups. For example, you can connect Burn via ONE-CORD while sending a clean, unaffected signal through MAIN OUT to another amplifier, effect chain, or mixer. This setup lets you mix rotary effects and dry sounds from a single instrument.

Separating the reverb and rotary simulation into an external device also allows you to swap Burn with other rotary simulators from different manufacturers.

IMPORTANT NOTE:

Although the ONE-CORD connector resembles an RJ45 (Ethernet) plug, it is **not** an Ethernet connection. Do **not** connect it to computers, Ethernet networks, or LAN devices, as this may damage your equipment.



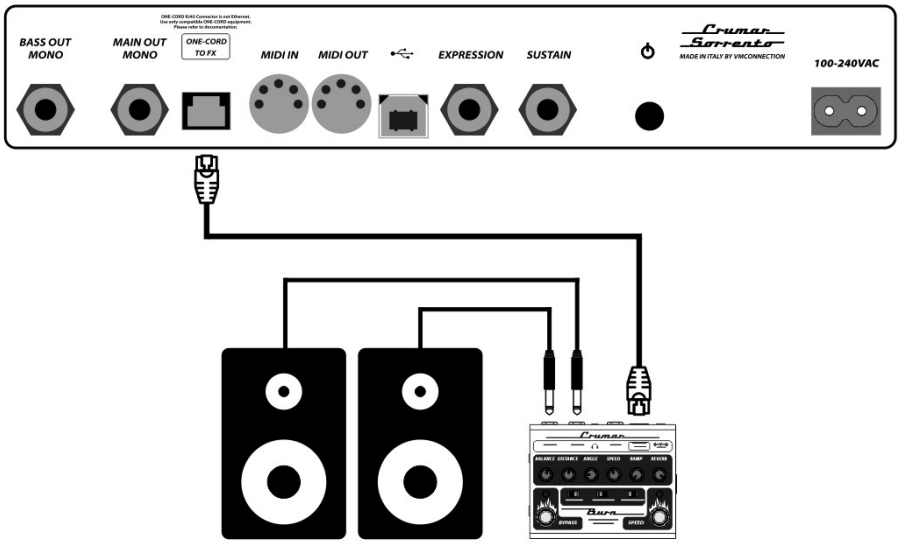
IMPORTANT NOTE ABOUT ONE-CORD, GROUND MANAGEMENT AND NOISES.

Sorrento is a class II instrument, this means that it doesn't require earth ground connection. Also Burn, as a typical effect pedal, is class II and these kind of effects are usually using wall wart power supplies without earth connection. When the two are connected together with ONE-CORD and especially when you are listening to the instrument only with headphones, you can experience noises coming from the organ and from the Burn unit: this is happening because the ground is "floating". The solution is not universal and depends on many different factors. You can try these:

- Don't use the ONE-CORD but just use the standard way: a PSU connected to Burn and a jack cable from MAIN OUT of Sorrento to IN of Burn.
- Connect Sorrento to a mixer or to an amplifier as well.

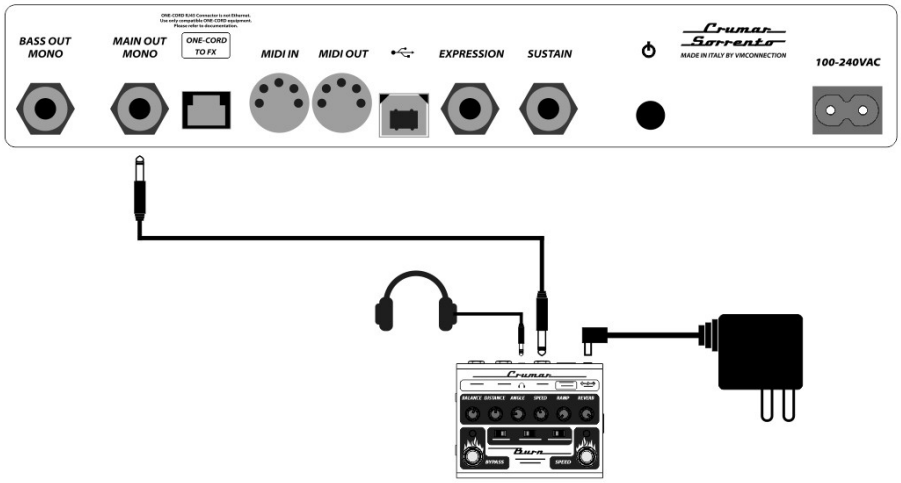
Example 1: Sorrento and Burn basic configuration.

- ONE-CORD connection between Sorrento and Burn.
- Two Jacks from the stereo lines of Burn to a left speaker and a right speaker (with or without a mixer in between).
- You hear the sound of Sorrento and the synth bass sound with the rotary speaker simulation and the reverb in stereo through your speakers.



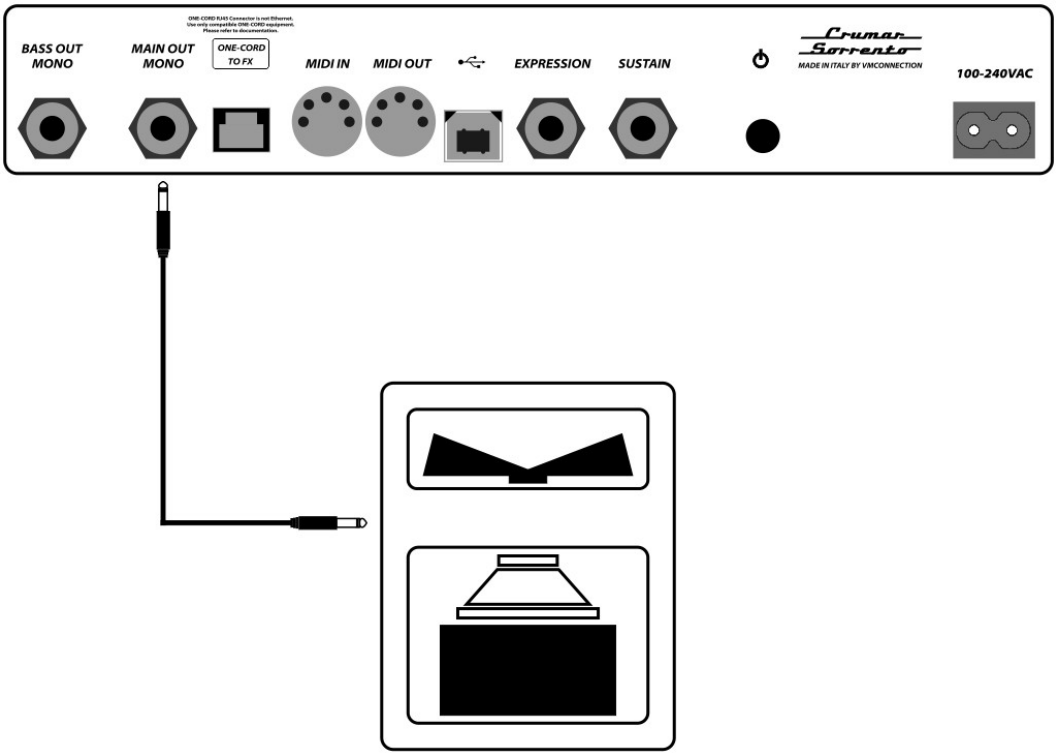
Example 2: Sorrento and Burn basic configuration with headphones.

- A jack cable from MAIN OUT of Sorrento to INPUT of Burn.
- A stereo headphones set from the headphones out of Burn.
- You hear the sound of Sorrento and the synth bass sound with the rotary speaker simulation and the reverb in stereo in your headphones.
- A power supply for Burn (9v 300mA with negative center).
- **YOU CAN USE ALSO THE ONE-CORD CONNECTION TO AVOID USING THE POWER SUPPLY FOR BURN BUT YOU CAN EXPERIENCE AUDIO NOISES WHEN ONLY HEADPHONES ARE PLUGGED. PLEASE CHECK PAGE 10 FOR DETAILS.**



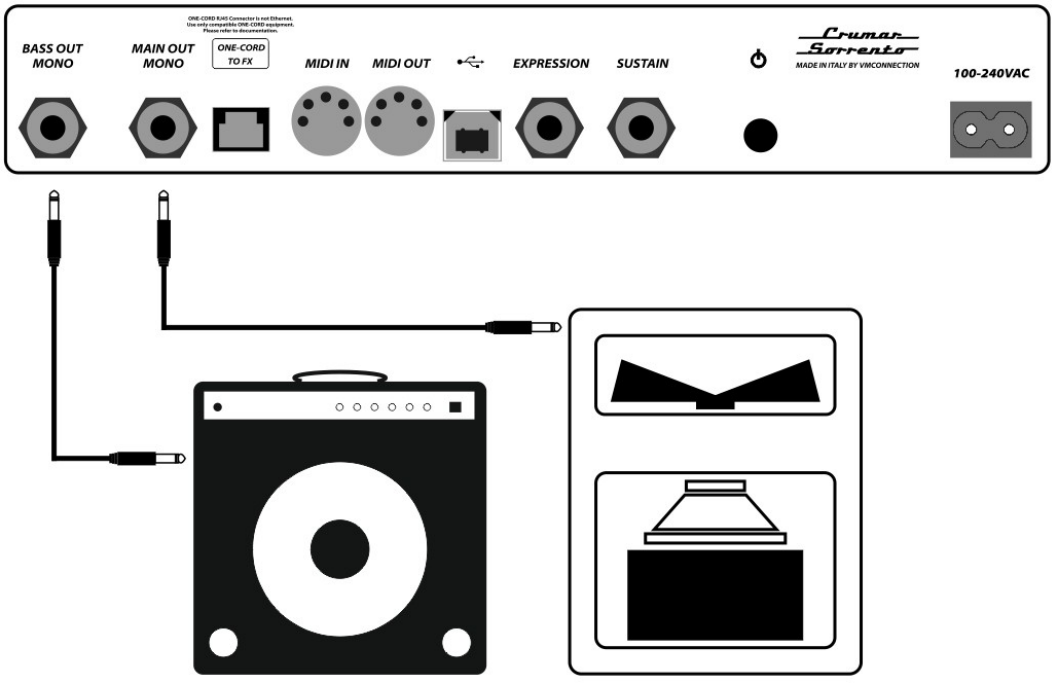
Example 3: Sorrento with a real rotary speaker.

- A jack cable from the MAIN OUT of Sorrento to the audio in of the amplifier.
- You hear the sound of Sorrento and the synth bass in your rotary amplifier.



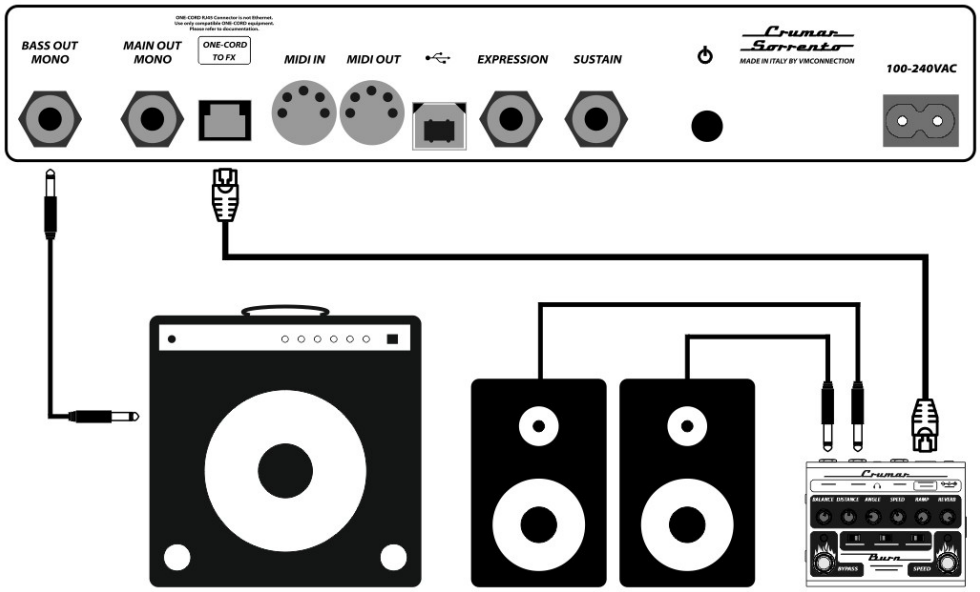
Example 4: Sorrento with a real rotary speaker and a bass amplifier.

- A jack cable from the MAIN OUT of Sorrento to the input of your rotary speaker.
- A jack cable from the BASS OUT of Sorrento to the input of your bass amplifier.
- You hear the sound of Sorrento in your rotary amplifier and the sound of bass synth in your bass amplifier.



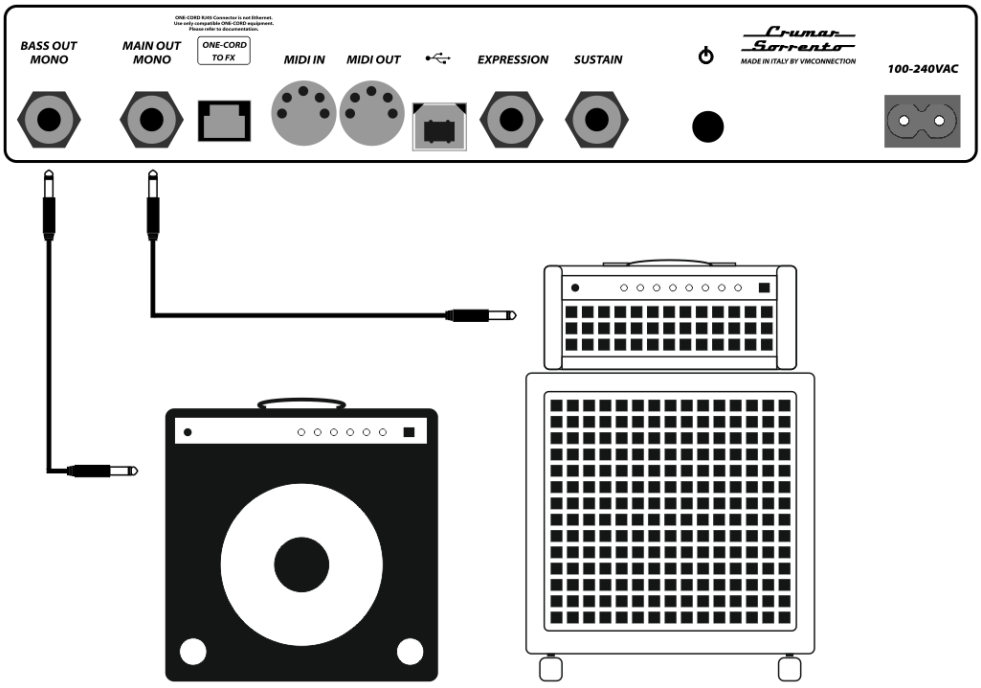
Example 5: Sorrento with Burn and a bass amplifier.

- ONE-CORD connection between Sorrento and Burn.
- Two Jacks from the stereo lines of Burn to a left speaker and a right speaker.
- A jack cable from the BASS OUT of Sorrento to the input of your bass amplifier.
- You hear the sound of Sorrento with the rotary simulation and the reverb through your speaker and the sound of bass synth in your bass amplifier.



Example 6: Sorrento with a guitar amplifier and a bass amplifier.

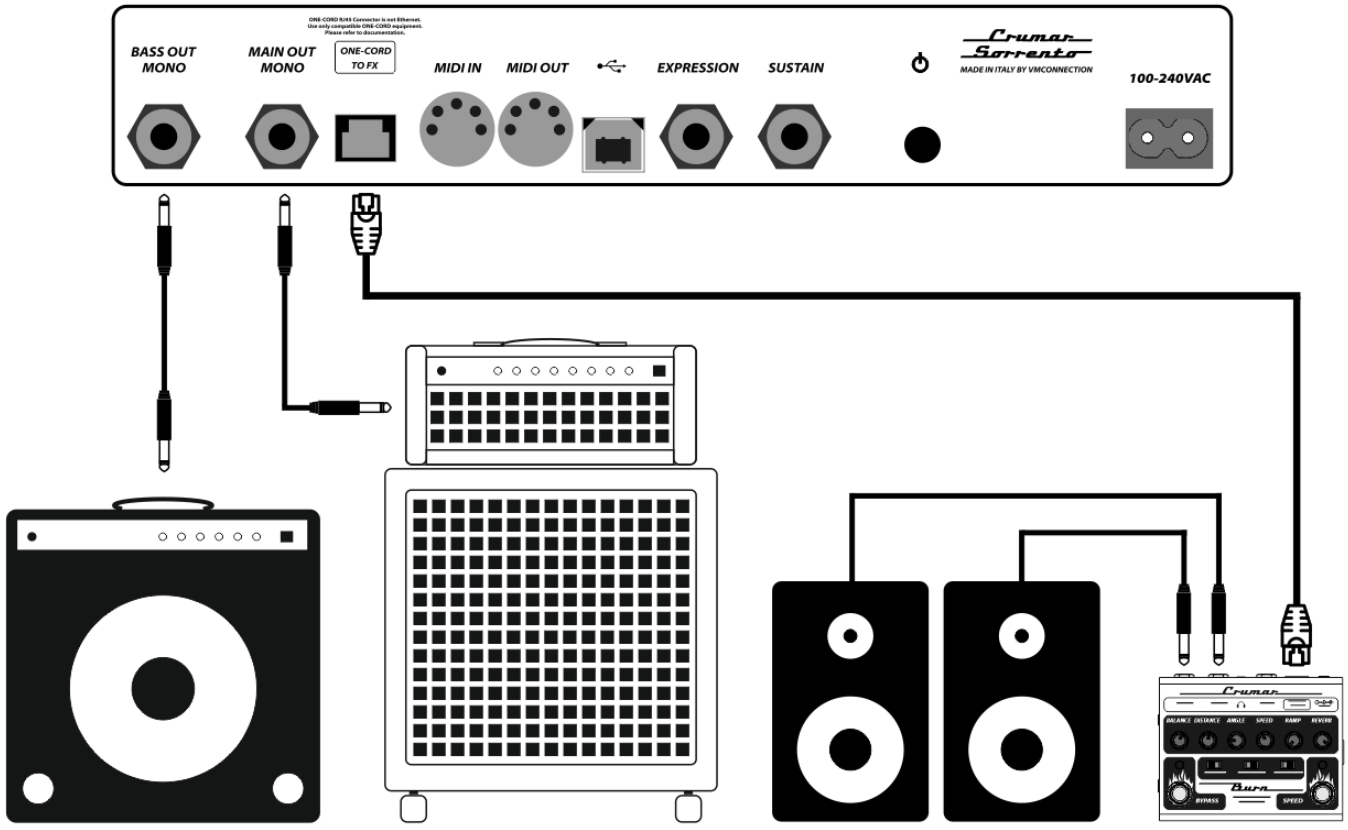
- A jack cable from the MAIN OUT of Sorrento to the input of your guitar amp.
- A jack cable from the BASS OUT of Sorrento to the input of your bass amplifier.
- You hear the sound of Sorrento in your guitar amplifier and the sound of bass synth in your bass amplifier.



Now let's start to be creative!

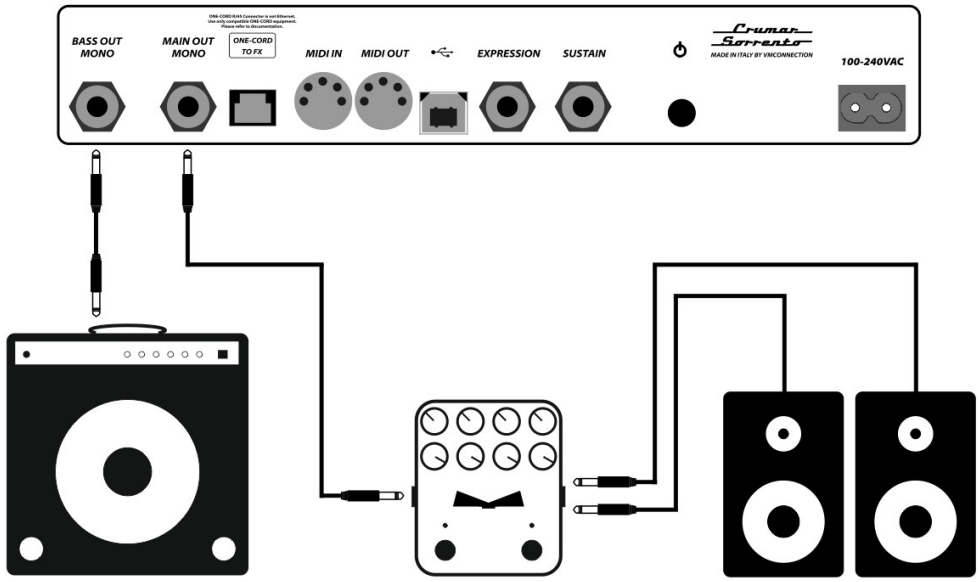
Example 7: Sorrento with a guitar amplifier, a bass amplifier and Burn.

- ONE-CORD connection between Sorrento and Burn.
- A jack cable from the MAIN OUT of Sorrento to the audio in of your guitar amplifier.
- A jack cable from the BASS OUT of Sorrento to the audio in of your bass amplifier.
- You hear the sound of Sorrento in your guitar amplifier without any rotary simulation and without reverb, you hear the sound of bass synth in your bass amplifier and you can still have the sound of Sorrento with the rotary simulation and the reverb through your speakers. You can lower the volume of the guitar amplifier or the volume of the speakers connected to the Burn in order to choose between the two sounds: one more powerful, perfect for rock music and the other one with the rotary effect.



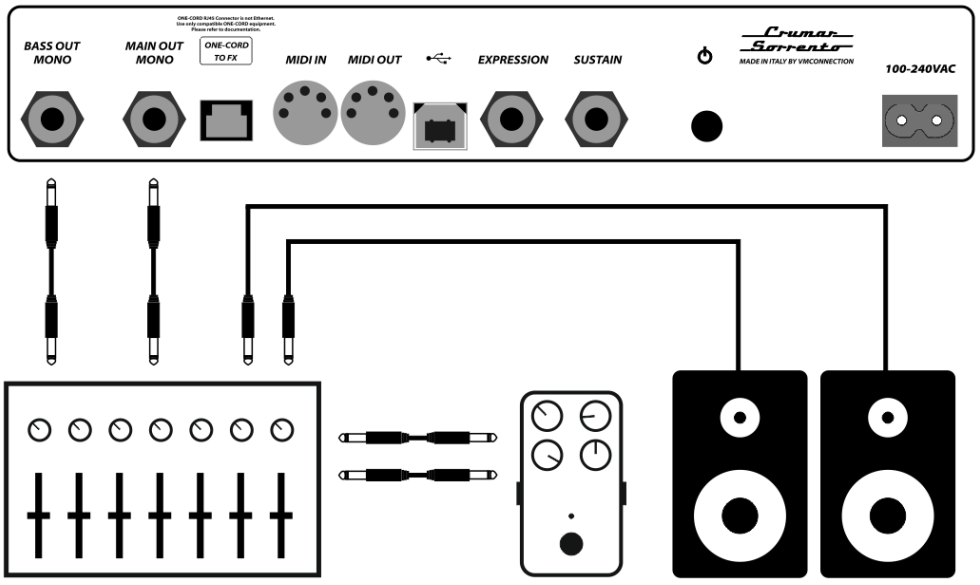
Example 8: Sorrento with a bass amplifier and a rotary simulator.

- A jack cable from the MAIN OUT of Sorrento to the input of your favorite rotary simulator unit.
- A jack cable from the BASS OUT of Sorrento to the input of your bass amplifier.
- You hear the organ sound of Sorrento in your rotary speaker simulator and the bass synth sound in the bass amplifier.



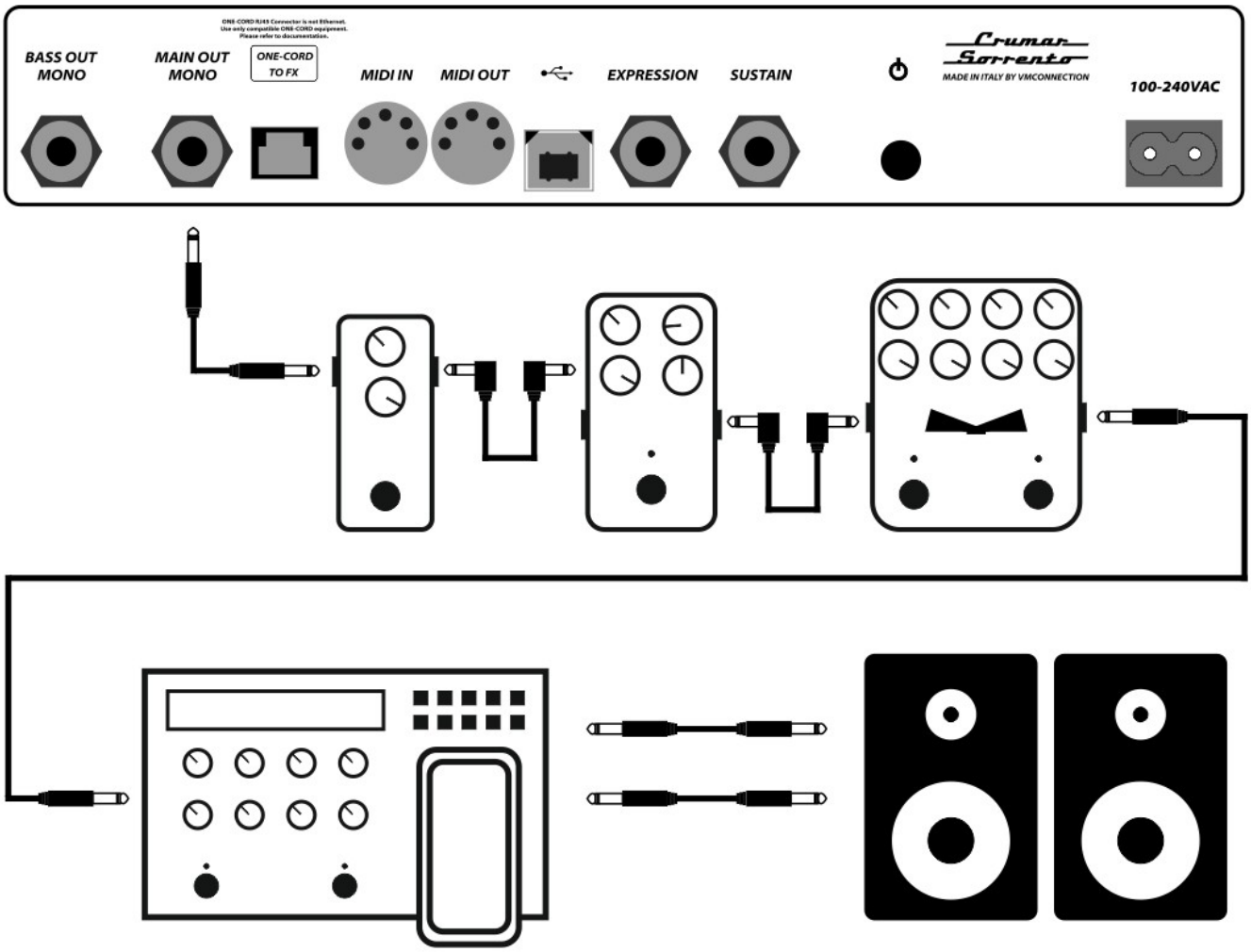
Example 9: Sorrento connected to a mixer.

- A jack cable from the MAIN OUT of Sorrento to one audio in of mixer.
- A jack cable from the BASS OUT of Sorrento to one audio in of mixer.
- You can take advantage of the internal routing capabilities offered by your mixer sending the IN/OUT audio signal to an effect pedal to process only the organ sound while the bass synth sound is passing to the speakers without effects or using on-board effects of the mixer (if available).



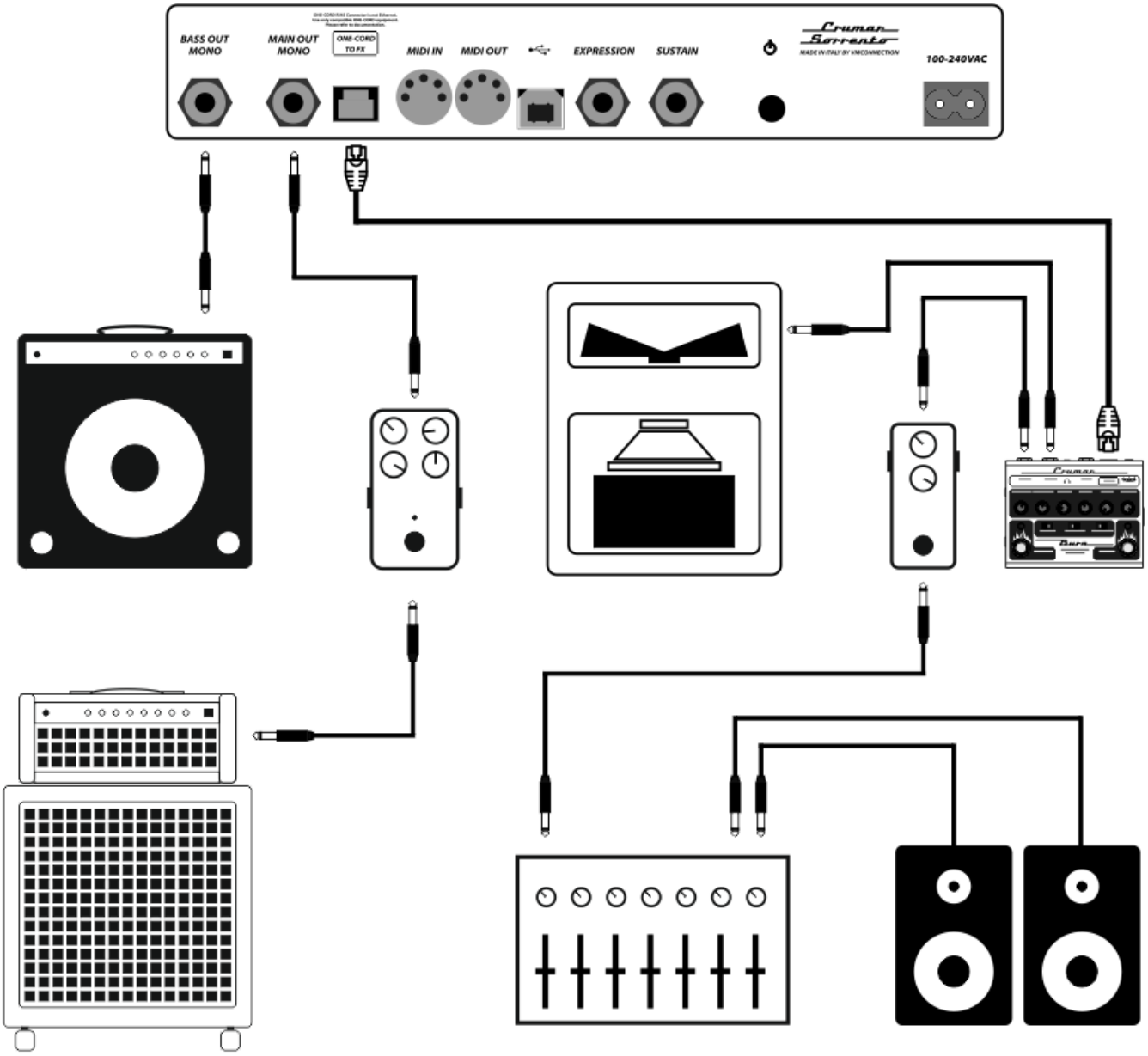
Example 10: Sorrento with an effect chain.

- Plug your entire effect chain to the MAIN OUT of Sorrento using standard jack cables.
- You can also connect a pedalboard on it and, at the end of the chain, you can go your mixer, a pair of speakers or to a guitar amplifier.

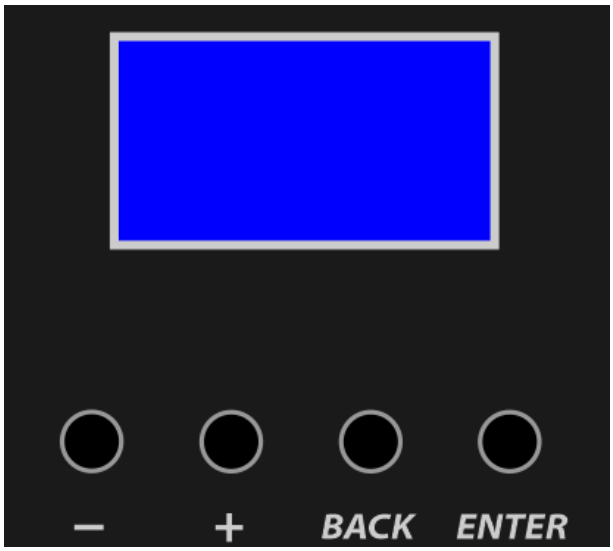


Example 11: Sorrento with effect chain, amplifiers and Burn in bypass mode.

When Burn is in bypass mode, the rotary speaker simulation is turned off, so you will hear the Sorrento sound through both outputs of Burn. This creates an interesting setup with three identical audio outputs: the MAIN OUT plus the two outputs on Burn. Even in bypass, Burn's reverb remains active, allowing for more complex configurations. For example, the BASS OUT can be connected to a dedicated bass amplifier, the MAIN OUT routed to a guitar amplifier with an effects pedal in between, and Burn connected to Sorrento via the ONE-CORD cable. One Burn output can go directly to a rotary speaker, while the other passes through an effects unit such as a phaser before reaching a mixer and finally a pair of speakers. This is just one of many possibilities offered by this setup.



4. DISPLAY, NAVIGATION AND EDITING



Crumar Sorrento does not require external editor software; you can change all instrument settings directly from the keyboard's control panel. For your convenience, this panel is located in the lower left area, next to the lower manual.

The control panel is user-friendly and features an OLED display for immediate visual feedback, along with four navigation buttons. The display is normally off to save power, but it turns on as soon as you press the **ENTER** button, showing the last active page. After a few seconds of inactivity, the display will automatically switch off.

- The **ENTER** button turns the display on and allows you to enter the selected parameter for editing.
- The **BACK** button exits parameter editing mode, returns to the main menu navigation, and turns off the display if pressed from the main menu.
- The **+** and **–** buttons let you navigate through the main menu and, once inside a parameter, increase, decrease, or change its value.

The OLED display is divided into three rows:

1. The first row shows the current menu section.
2. The second row displays the name of the selected parameter within that section.
3. The third row indicates the current value of the selected parameter.

When a row is highlighted, this means that the navigation buttons + and - will have effect on that specific row. For example, if you see the first one highlighted, the navigation button + and - will scroll through the parameters of that sections. Once reached the desired parameter, press ENTER to edit it. Now you will notice that the highlighted one will be the value of that parameter.
Change the value with the + and - buttons: once you have reached the value that you like, just press BACK.

There are three sections:

SOUND : here you will find all the parameters that will affect the sound of Sorrento.
GLOBAL: this section is used to change the overall behavior of the instrument.
MIDI: here you can change a few setting that will affect the MIDI in and out.

SOUND

The available options are:

- Generator boost: this parameter changes the amplitude chart of the virtual tonewheel generator. It also works for the transistor sound.
- Xtalk level: this parameter changes the amount of crosstalk caused by the virtual analog circuitry, some kind of interference between them that helped create the iconic sound.
- Percussion length: with this one you can decide the length of the percussion effect.
- Percussion drop : this parameter is affecting the fall of the percussion effect.
- Chorus Mix: vibrato and chorus effect is a very important element of the organ sound. Here you can decide the mix between the dry sound and the vibrato/chorus effect.
- Keyclick color: the keyclick is that special "noise" the you hear when you press or release a key of the organ. With this setting you can adjust the tone of it.
- Keyclick length: used to adjust the length of the keyclick noise.
- Limiter: this parameter affects the volume of the organ sound in combination with the keys. Higher values will limit the amount of volume when more keys are pressed.

GLOBAL

The available options are:

- Tuning: from 430 Hz to 450 Hz.
- Assignable: with this parameter you can pick a parameter and have it in the assignable knob. The possibilities are: ring modulator, generator boost, percussion length, chorus mix and limiter.
- Sustain pedal: four selections are available. Sustain OFF, sustain upper manual, sustain lower manual or sustain both.
- Sustain polarity: if your sustain pedal doesn't have the polarity switch, here you can set the instrument to be compatible with sustain pedals normally open or normally closed.
- Transpose: the transpose will affect both keyboard and the range is from -12 semitones to + 12 semitones.

MIDI

The available options are:

- MIDI Channel: Sorrento is an organ with two manuals and support for the pedalboard and these three elements are sending MIDI note ON and OFF messages on separate channels. The MIDI channel selection you can make here is affecting what we call "basic channel" that is the upper manual and the controls, the lower manual will be "basic channel +1" and the pedalboard will be "basic channel +2". So for example, if you set the MIDI channel to 1, upper manual and controls will send to MIDI channel 1, lower manual to MIDI channel 2 and the pedalboard to MIDI channel 3. This parameter will affect both MIDI in and MIDI out.
- Send CC: MIDI notes are always sent and received. Here instead you can decide if you want the MIDI control change messages to be sent via MIDI or not.
- Receive CC: with this option you can decide if Sorrento needs to recognize or ignore the MIDI control change messages received via MIDI.
- Receive PC: MIDI Program change messages received by Sorrento will only affect the organ selection. With this parameter you can tell the instrument to recognize or ignore the MIDI program change messages received via MIDI.
- Velocity: Organ sounds are not velocity sensitive. In case you would like to use the two keyboards of Sorrento to control an external device and you need to send MIDI notes ON/OFF messages but with velocity option, this parameter needs to be ON.
- Soft thru: when this setting is ON, every MIDI message entering via MIDI IN and USB to Sorrento, will be forwarded to the MIDI OUT port and USB.

Factory reset: in case you need to have all these parameters back to factory setting, just power on the instrument while holding the MANUAL UPPER button.

Notes about saving drawbars value "status". Sorrento is storing the actual drawbars status only after a button in pressed.

5. MIDI MAP

PARAMETER NAME	C.C. NUMBER	REMARKS	PARAMETER NAME	C.C. NUMBER	REMARKS
Drawbar Upper n.1	12		Percussion On	66	
Drawbar Upper n.2	13		Percussion Soft	70	
Drawbar Upper n.3	14		Percussion Fast	71	
Drawbar Upper n.4	15		Percussion Third	72	
Drawbar Upper n.5	16		Vibrato Type	73	Values = 0, 25, 50, 76, 101, 127
Drawbar Upper n.6	17		Vibrato Upper Switch	31	
Drawbar Upper n.7	18		Vibrato Lower Switch	30	
Drawbar Upper n.8	19		Sustain pedal	64	
Drawbar Upper n.9	20		Epression pedal	11	
Drawbar Lower n.1	21				
Drawbar Lower n.2	22				
Drawbar Lower n.3	23				
Drawbar Lower n.4	24				
Drawbar Lower n.5	25				
Drawbar Lower n.6	26				
Drawbar Lower n.7	27				
Drawbar Lower n.8	28				
Drawbar Lower n.9	29				
Drawbar Pedals n.1	33				
Drawbar Pedals n.2	34				
Drawbar Pedals n.3	35				
Keyclick	75				
Percussion volume	89				
Assignable (RING MOD.)	92				

9. SPECIFICATIONS

Technical specifications (Sorrento):

- power rating: 100 ~ 240 Vac
- Dimensions: 39,37'' x 5,9'' x 16,14'' - cm100 x cm15 x cm40,8
- weight: 28,6 lbs - 13 Kg

Technical specifications (Burn):

- power rating: 9v - 300mA center negative
- Dimensions: 4,5'' x 1,33'' x 3,7'' - cm25 x cm20 x cm10
- weight: 1,3lbs - 0,6Kg

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