midimini V30

USER MANUAL

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This Limited Warranty applies only to ANALOGIA INC./STUDIO ELECTRONICS purchased in the United States of America. Outside the USA, warranty policy and service is determined by the laws of the country of purchase and followed by our local authorized distributor. A listing of our authorized distributors is available at http://www. studioelectronics.com/shop/distributors/

ANALOGIA INC./STUDIO ELECTRONICS warrants to the 1st owner of a covered product purchased directly from ANALOGIA INC./STUDIO ELECTRONICS, or an authorized ANALOGIA INC./STUDIO ELECTRONICS dealer in the US, that this product will be free from defects in materials and or workmanship for a period of one year from the date of purchase. Please register this product online via **https://www.studioelectronics.com/support/contact/** to establish the date of purchase (NOT A REQUIREMENT FOR WARRANTY SERVICE BUT A GOOD IDEA).

To exercise your rights under this Warranty as the 1st owner/purchaser, **YOU MUST SHIP THIS PRODUCT IN ITS ORIGINAL PACKAGING** (which we can replace and send to you for $10) at your expense, with proof of purchase documentation and the ANALOGIA INC./STUDIO ELECTRONICS supplied power adapter, to ANALOGIA INC. An RMA (Return Material Authorization) number from ANALOGIA INC./STUDIO ELECTRONICS must be obtained 1st before returning any product. Email RMA requests to rma@studioelectronics.com, or call us at (310) 640-3546 to secure an RMA #. Products shipped to ANALOGIA INC. without an RMA will be refused and returned. Shipping insurance is optional, but highly recommended.

ANALOGIA INC./STUDIO ELECTRONICS will repair or replace this product at its sole option and at no charge to you for parts and labor—when deemed necessary and within the warranty period—provided that ANALOGIA INC./STUDIO ELECTRONICS reserves the right to determine whether the product is “defective” for purposes of this Limited Warranty. This Warranty does not apply if damage to this product occurs as a result of abuse or misuse, abnormal use or handling, improper packaging, another product’s interaction, exposure to temperature extremes, or if the product has been altered or modi ed/customized in any way, or the damage was caused by unauthorized repair or service. The original product must return to ANALOGIA INC. unaltered.

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This Limited Warranty and the right of replacement is in lieu of any and all other warranties—which you hereby waive—and it gives US purchasers specific legal rights. You may also have other rights which vary from State to State.

ANALOGIA INC., 530 West Palm Ave. El Segundo, CA 90245

1 SAFETY ESSENTIALS

Warnings, Precautions, and Advice

WARNING - When using electric products basic precautions should always be followed to avoid the possibility of serious injury or even death to you or others, as well as damage to the device or other property from electrical shock, re, or other risks. These precautions include, but are not limited to, the following “to do” list

• Read, save, and understand all of the instructions before using product.

• Do not use product near any water source—such as a bathtub, wash basin, kitchen sink, or swimming pool.

• Clean with a soft, dry cloth with unit unplugged from AC outlet.

• This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an Audiologist.

• Do not place anything heavy on the instrument.

• The product should be situated so that its location or position does not interfere with its proper ventilation.

• The product should be located away from heat sources such as radiators, heat registers, or other items that produce heat.

• Avoid using the product where it may be affected by dust or hot sunlight.

• Make sure the line voltage in your location matches the input voltage specifications on the DC power adapter.

• Mute channel volume before making audio connections to prevent malfunction and speaker damage.

• Unplug power supply cord from outlet when not in use for an extended period.

• Do not trample the power supply cord, trip over it, or pull at it; grasp the plug portion when unplugging.

• Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings.

• Protect the unit from strong jolts and vibration and never apply strong pressure to the front, back or side panels, or strike them in any manner.

The product should be serviced by qualified service personnel when:

a) The power supply cord or the plug has been damaged.
b) Solid objects or liquid either have fallen or spilled into the product.
c) The product has been exposed to rain.
d) The product does not appear to operate normally or exhibits a marked change in performance.
e) The product has been dropped, or the enclosure is damaged.

• Do not attempt to service the product beyond that described in the user maintenance instructions. All other servicing should be referred to qualified technicians.

DANGER – INSTRUCTIONS RELEVANT TO RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS:

Do not open the chassis. There are no user serviceable parts inside. Refer all servicing to qualified personnel only.

• Mute channel volume before making audio connections to prevent malfunction and speaker damage.

• Unplug power supply cord from outlet when not in use for an extended period.

• Do not trample on the power-supply cord, trip over it, nor pull at it, but grasp the plug portion when unplugging.

• Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings.

• Protect the unit from strong jolts and vibration and never apply strong pressure to the front, back or side panels, or strike them in any manner.

GROUNDING INSTRUCTIONS: This product must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord with equipment grounding conductor and a grounding plug, which must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER: Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product. If it does not t the outlet, have a proper outlet installed by a qualified electrician.

SAVE THESE INSTRUCTIONS!

The lightening flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltages" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and servicing (maintenance) instructions found in the literature accompanying the product.

2 UNPACKING & INSPECTION

Check the contents of the shipping carton. Be careful when unpacking your Midimini V30 to insure nothing is missing or damaged. Save the carton and packing materials for possible factory calibration or repair issues in the future.

Midimini V30 ships with the following items:

1. IEC power cord
2. User Manual: Introduction and Essentials
3. Thank You Letter
4. Certificate of Authenticity
5. SE Sticker
6. MIDIMINI V30 Sticker

3 SETUP, CONNECTIONS & CARE

What you will need:

1. A clean and sturdy surface where you can set your Midimini V30.
2. A properly grounded AC outlet supplying 100 Volts to 240 Volts AC; 50/60 Hz.
3. One 1/4 Inch (TS) Male Instrument Cable, and means of amplification or monitoring: there is no headphone connection.

POWER

Plug the included IEC cable's female end into the IEC power jack on the back of your MM V30, and then plug the male end of the cable into an AC outlet. MM V30 uses a universal power supply that operates with power sources ranging from 100 Volts to 240 Volts AC, 50/60 Hz. To avoid damaging your V30, and to insure safe and proper power connection, see **VOLTAGE**, Pg, 26.

NOTE: Allow MIDIMINI V30 5-10 minutes to warm up before use, as it is an Analog Instrument. If the unit has been subjected to temperatures under 60 degrees for an extended period, optimal oscillator tuning and stability may require 15-20 minutes of warm-up time, during which time you could dig deeper into this manual. Avoid operation in direct sunlight.

AUDIO OUTPUT

With the V30 OUT VOLUME knob turned to 0, plug one end of a 1/4" instrument cable into the Audio output and the other end of the cable into your mixer, amplifier, or audio interface. Adjust OUT VOLUME to desired level.

NOTE: The **AUDIO** out jack is TS and TRS 1/4" cable compatible.

CARING AND CLEANING

Clean the V30 with a soft, nearly dry cloth only; do not use solvents or abrasive detergents. The semi-matte finish is unique and requires thoughtful handling and maintenance—like any good lover—it's a luxury finish to be sure.

4 REGISTRATION

Registering your Midimini V30 synth creates a handshake between owner and manufacturer, insures access to Analogia Inc. tech. support, warranty service, product updates, and if desired, promotional offers. As always, our Facebook, Twitter, and Instagram outlets are current and generally helpful, so stay tuned.

5 SIGNAL FLOW CHART

Coming Soon!

6 FEATURES & CONTROLS

The **Midimini V30** is no mere **Midimini** repackage; while it retains its part for part recreation of the famed Minim—g in all vital areas, a substantial infusion of creativity and sweat, not likely to be missed even by the implacable, question mark-postured, casual social media observer. So why not begin the feature boasting with the mention of the addition of hardware Ring Mod (this writer asked with none particular in mind), or the near generous “Outs to Outs” compatible Eurorack-sympathetic patch points gracing this proud rackmount’s almost always feature-starved bottom edge? Well... then, we would be minimizing the savage and roaring Feedback, and snappy ENV 2’s master override of ENV 1 (à la the Juno 106). Such thrilling effects and colors cannot go unheralded.

On to the V30’s Short List:

• Three Voltage Controlled Oscillators
• White & Pink Noise Generator
• External Input Processor with Level Control
• Expanded Oscillator & Filter Cross Mod
• Classic 24 dB Transistor (hand-matched) Ladder Filter
• 2 Hardware Envelopes with independent release & ENV2 Master Mode
• Dedicated LFO Modulator / AFM-capable Digital Oscillator & LFO Gate
• Audio Mixer with Amp Drive, Feedback Gain, Λ1 Wave filter bypass & External In
• Fuzzy and Furious Vintage External Input Feedback loop with gain control
• 14 3.5 mm (Eurorack) Outs-to-Outs compatible Patch Points, including CV & Gate
• Handy Drone for ease of tuning and... droning.
• Hardware Ring Mod from our SE-1/ATC-1/Boomstar synths

Root Level Geeky:

• Metal shafted pots throughout
Where we needed mil-spec audio tapers, because PC Mount tapers underperform in critical areas, we hand-wired in PEC Cantina pots (a commercial mill spec variant), for the attacks and decays—resonance too. The balance of the pots (PC Mount linear taper) are made by Alpha, a very good quality offering with heavy grease; strangely, the higher quality hand-wired pots use a lighter grease making them feel "scrapey" by comparison, but they are almost 10X as expensive, pushing up the V30 build cost a bit.

• Sturdy and reliable Mountain Switch toggle switches

The front panel lays out these features and controls, and yet others, together by type, left to right: **CON**, **LFO**, **OSCILLATORS**, **MODIFIERS**, **COLOR**, **MIXER**, **FILTER/MODIFIERS**, **OUT**, in an inviting and coherent manner. Single function pots and switches abound, with the exception of the LEARN menu, where certain vital hidden functions can be uncovered.

7 THE ETHOS BEHIND THE V30

Los Angeles, CA / Maiden Rock, WI 1-13-2020

We at Analogia Inc./Studio Electronics are extremely proud of the V30. To be honest, we love everything about it. Did the good people of Earth need another version of the MiniMoog/MidiMini? In the case of the V30, most emphatically yes! Are we faithfully recreating the MM sound? Again, most assuredly yes! Every circuit is accurate to the most minute detail. Will you see any Surface Mount technology inside? No. In our opinion, a disgrace. The highest quality Through-Hole components (including chunky ½ watt resistors in the filter and power circuits) placed on spacious circuit boards, that give electrons room to roam, are part and parcel of the majestic sounds this rackmount Analog synthesizer beauty creates. We've spent more $$ spent on fine pots and knobs than the entire build cost many a cloned product... or two. We call this approach, Premium Quality Analog. Since 1985, which our logo wraps.

This is not just a "stick a new face plate on it and call it new" re-issue of the original Midimini—most definitely not. The functionality, connectivity, and sound palette have been massively improved and expanded. The list is far too long to get into here; please refer to the comparison chart on the following page to gather the necessary metrics. In addition to all the classic Mini sounds ever played or recorded, our patch point generous V30 will take you on a fantastic voyage of new, and persistently thrilling sonic adventures.

The focusing of 35 years worth of analog design expertise and creativity into the V30, has resulted is something decidedly special—gorgeous sounding, truth be told. All the countless hours of design and testing (the good, bad, and the ugly) were more than worth the effort. With a reasonable amount of humility, and an acceptable amount of beaming pride, we proclaim the Midimini V30 an SE masterpiece! We believe you'll share the same view upon seeing and experiencing it.

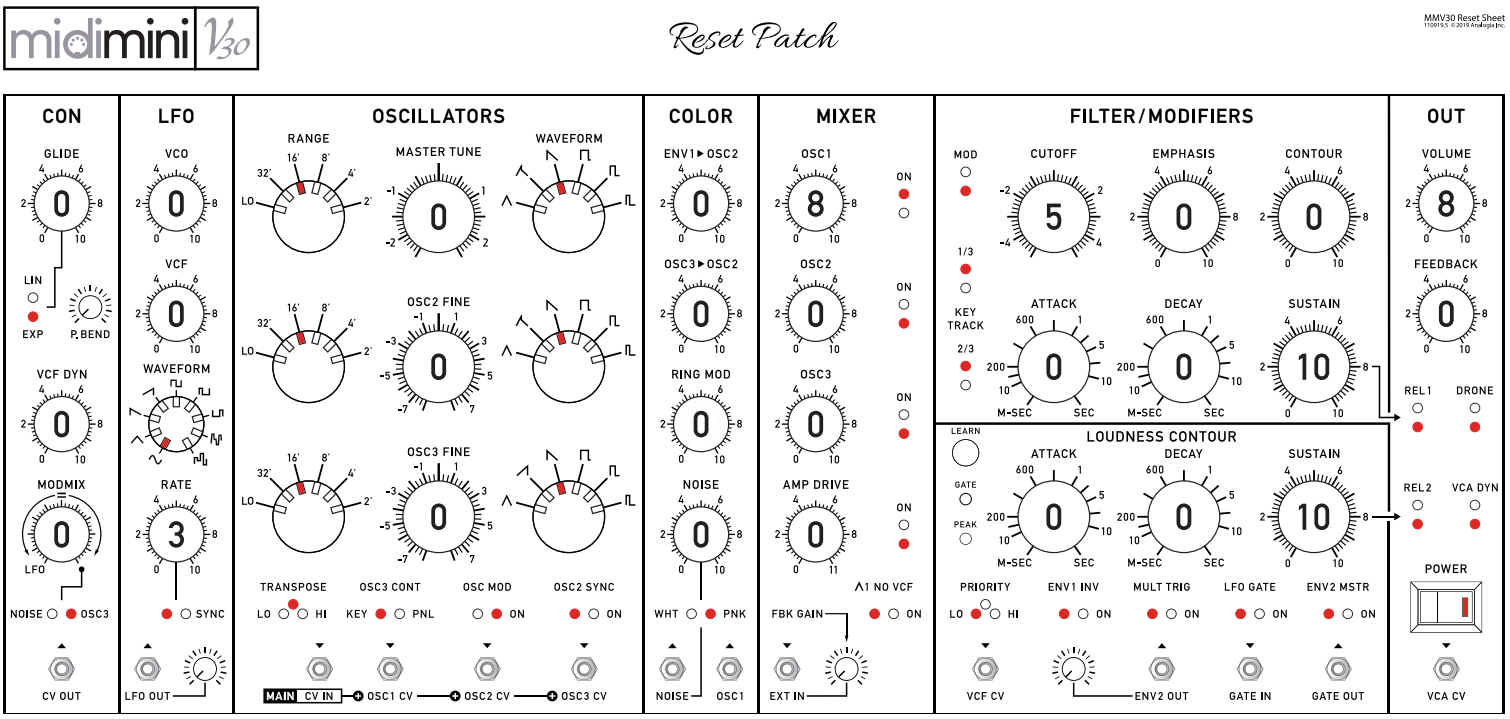
For those who have enjoyed our instruments these past 35 years, we thank you; you were onto something after all.

For those new to SE, what took you so long, strangers? Nonetheless, we are delighted to have you on board. Welcome to the party!

Sincerely,
Tim Caswell
Greg St. Regis
Marc St. Regis

8 RESET PATCH

"We have talked (again) to engineerz," and they still advise returning to this very basic patch, to restart one's exploration of the Midimini V30's sound and structure, when overly puzzled, or utterly lost. So do we.



Fullsize Reset pdf

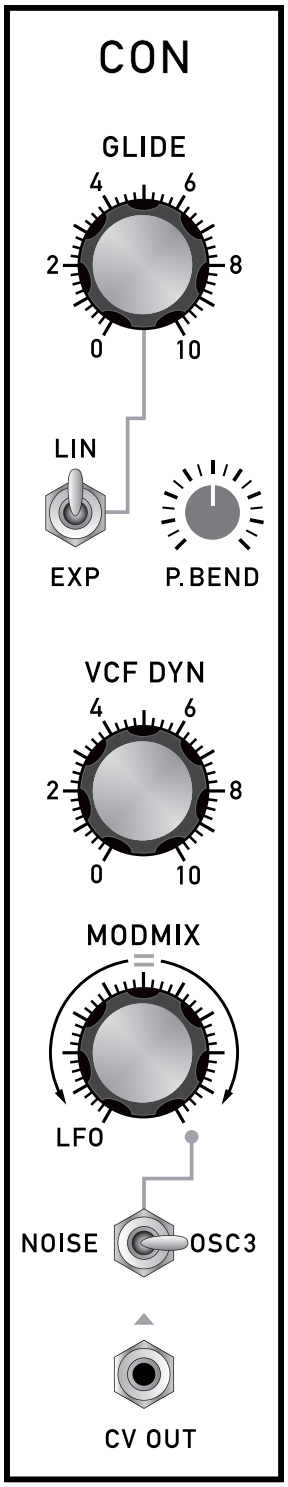
9 FRONT PANEL

FRONT PANEL pg. 2

Complete Front Panel pdf

9a CON

Soft & Hardware Control Frequ-ing



Welcome to the jungle of the V30 Front Panel. We tried to make this an entertaining space for rediscovering what kept your groove going and growing back in the 90s and 2000s (Dare we admit it's been that long?), and a neoteric, revitalizing, analog day spa for your monophonic, move-your-sonics workflow reality. We like to think of it as "Bouncing it Forward". Just don't neglect the Eurorack-leaning "Outs to Outs" friendly patch points. Experiment without fear—you can't hurt it.

GLIDE

Glide produces a seamless, continuous shift in pitch when transitioning from one semitone to the next. The **GLIDE** knob sets the amount of time taken between notes: 0 = off, 10 is maximum. A familiar feature on early monophonic synthesizers, glide or portamento is also implemented on polyphonic synths, like our Omega CODE rackmount beast.

LIN - EXP

This two-position switch selects software linear or exponential glide curves.

P. BEND

Sets MIDI pitch bender amount receive. Range is +/- 1 octave. Not connected to the **GLIDE** circuit.

VCF DYN

Play hard. Hear hard. Routes the MIDI velocity expression of your playing or sequencing to the filter **CONTOUR** parameter (not to filter **CUTOFF**). As the sensitivity is increased, the **CUTOFF** frequency will decrease. Work with the **VCF DYN, CUTOFF,** and **CONTOUR** controls to achieve the desired sound at either extreme of velocity, while triggering the softest and loudest levels.

MODMIX

Sets the balance between our digital **LFO** modulation and either **NOISE** or **OSC 3** (Oscillator 3). With the knob fully left, **LFO** modulation is unmixed; with the knob fully right, **NOISE** or **OSC3** modulation remain unadulterated, depending upon the switch selection; in the center position, an equal combo blend can be achieved, with a little finesse. In the original Mini only **OSC3** and **NOISE** could be mixed. We've added another player to the game with our digital **LFO.**

NOISE - OSC3

This two-position switch selects between **NOISE** and **OSC 3** modulation interaction with the **MODMIX.**

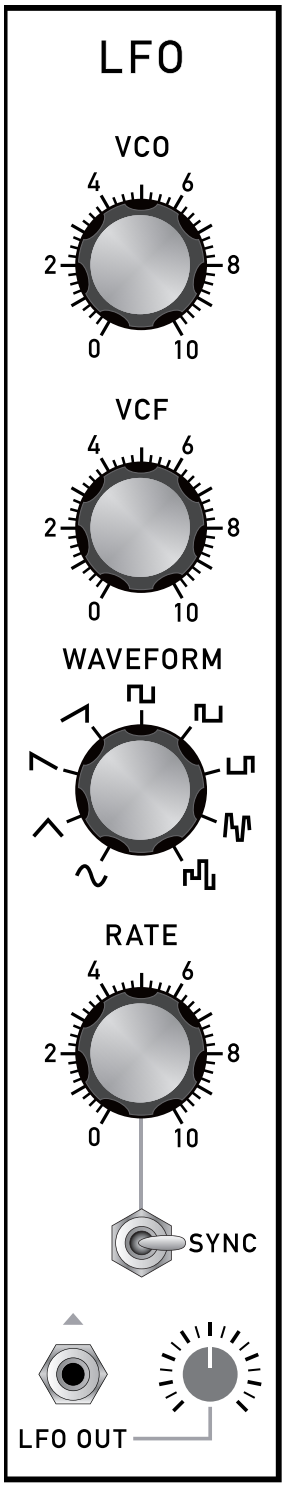
CV OUT

OSC3 Main pitch Control Voltage Output.

💡 **A handy MIDI to CV converter, carrying pitch and modwheel information.**

9b LFO

Modulation Meditations



Modulation is the use of a control signal to create an often repetitive pattern of pitch, level, or harmonic and rhythmic content changes; it infuses sound with movement, color, and intriguing unpredictability, where random circuits or calculations are involved. Keyboard Tracking, Envelope Generators, Frequency Modulation (OSC), Ring Mod, or this dedicated LFO can move, manipulate, and massage the sound—for a simple but lovely vibrato, or filter wah wah, to an audio rate/frequency mod. synthesis expression.

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IMPORTANT: In prior incarnations of the Mini, modulation could only be applied with a MIDI-controlled Modwheel. This LFO section provides extensive panel modulation, and **LFO** output patching, to which MIDI modwheel control will add if panel modulation isn't already maxed.

VCO

Sets the Low Frequency Oscillator depth fed to Oscillators 1, 2 &, 3—not dependent upon external Modwheel amount, which can be additive.

VCF

Sets the Low Frequency Oscillator depth fed to Filter Cutoff—not dependent upon external Modwheel amount, which can be additive.

WAVEFORM

The shape of the V30's LFO is determined by the waveform that the software LFO outputs, selected by the nine position, non-graduated WAVE knob, with the wave-shapes being sine, triangle, reverse sawtooth, sawtooth, square, 10% square, 90% square, slew random, and random.

RATE

Sets the speed, which reaches the audio frequency spectrum, allowing this additional LFO to be used as an Oscillation source as well as an audio frequency modulator.

SYNC

Locks the LFO rate to clock: RATE sets the 12 MIDI sync beat divisions, i.e., 4 measures, 2 measures, whole note, 1/2 note, whole note triplet, 1/4 note, 1/2 note triplet, 1/8 note, 1/4 note triplet, 1/16 note, 1/8 note triplet, 1/16 note triplet.

LFO OUT

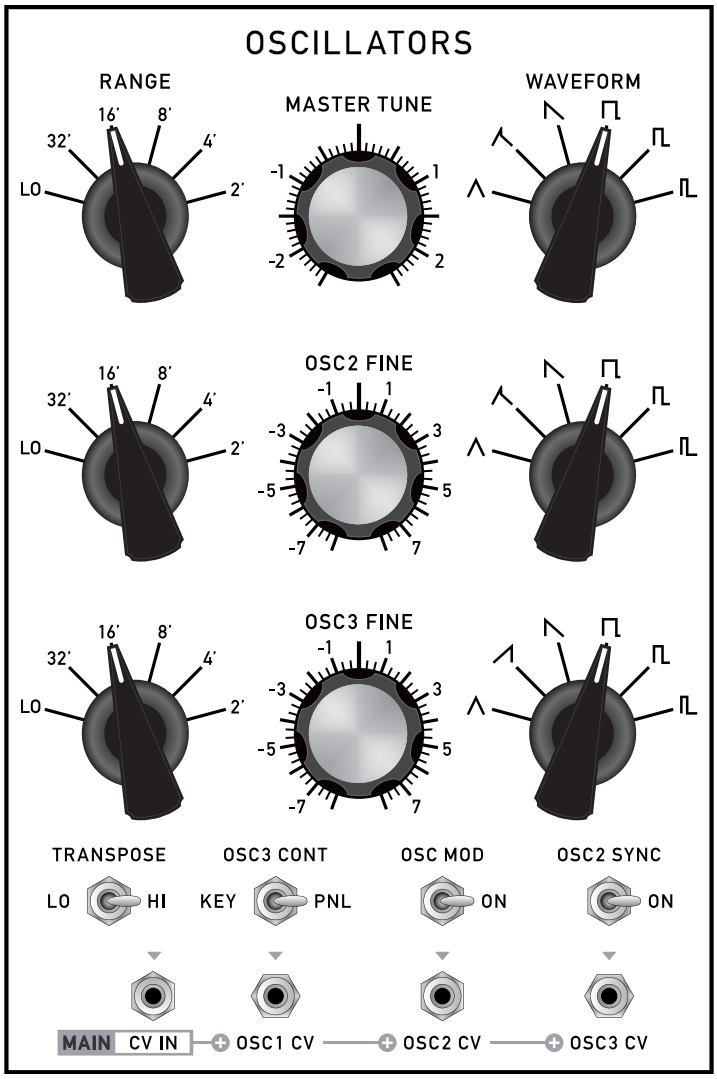
Lo Frequency Modulation

Nice for individual waveform modulation, and amplitude modulation. Patch it into the External Input and you have another Oscillator. VCA CV input is another avenue for experimentation.

(LFO OUT AMOUNT)

Attenuator for LFO output.

9c OSCILLATORS



Oscillations Courages

Oscillators are the biogenesis of Analog synthesis. An oscillator produces periodic or regularly repeating waveforms, e.g., pitched sounds. The Oscillator's tuning controls alter the frequency or pitch of the oscillators, whereas its wave shape selectors determine the harmonic spectrum of the signal, its basic timbre, or tone coloration. We here at SE think Voltage Controlled OSCs still sound best.

Waveform Characteristics

Triangle: Fluty, with odd harmonics like the Square wave, but its amplitude is quite weak in comparison to its fundamental. The Triangle possesses more brilliance than the similarly shaped sine.

Sharktooth: A lovely hybrid of the Triangle & Sawtooth waves for **OSC1** and **OSC2**. It contains a bit more harmonic energy than the Triangle wave, because it includes some even-numbered harmonics—the **16'** secret weapon in many R&B baseline classics.

Sawtooth: Bright, buzzy, brassy—the richest harmonically—containing both even and odd harmonics of the fundamental frequency. A very smooth tone is yours with a low-pass filter on tap. Oscillator 3 offers a reversed version of the wave in place of the sneaky Sharktooth from **OSC1** & **OSC2**.

Square: In its even state, it is a full bouncy sound—a bass beast for many. Near the edges of its duty cycle, or width, the beloved ⊓ becomes a "clavi," reedy, nasal affair, with odd harmonics only. The ⊓ (wide rectangle) introduces even numbered harmonics changing the overall harmonic mix. The ⊓ (narrow rectangle) hypes lower numbered harmonics—both odd and even.

RANGE (x3)

Sets the speed; selects the octave. **LO**: mainly clicks 'n' ticks below the audible range for humans, **32'**, **16'**, **8'**, **4'**, **2'**. The **LO** setting of **OSC2** can be employed as a very flexible modulator. FYI: These foot/pitch numbers come from the lengths of organ pipes in the great cathedrals/power stations (forgotten tech) of old—1/2 the length equals double the pitch.

Said clicks 'n' ticks can generate clever rhythmic pulses.

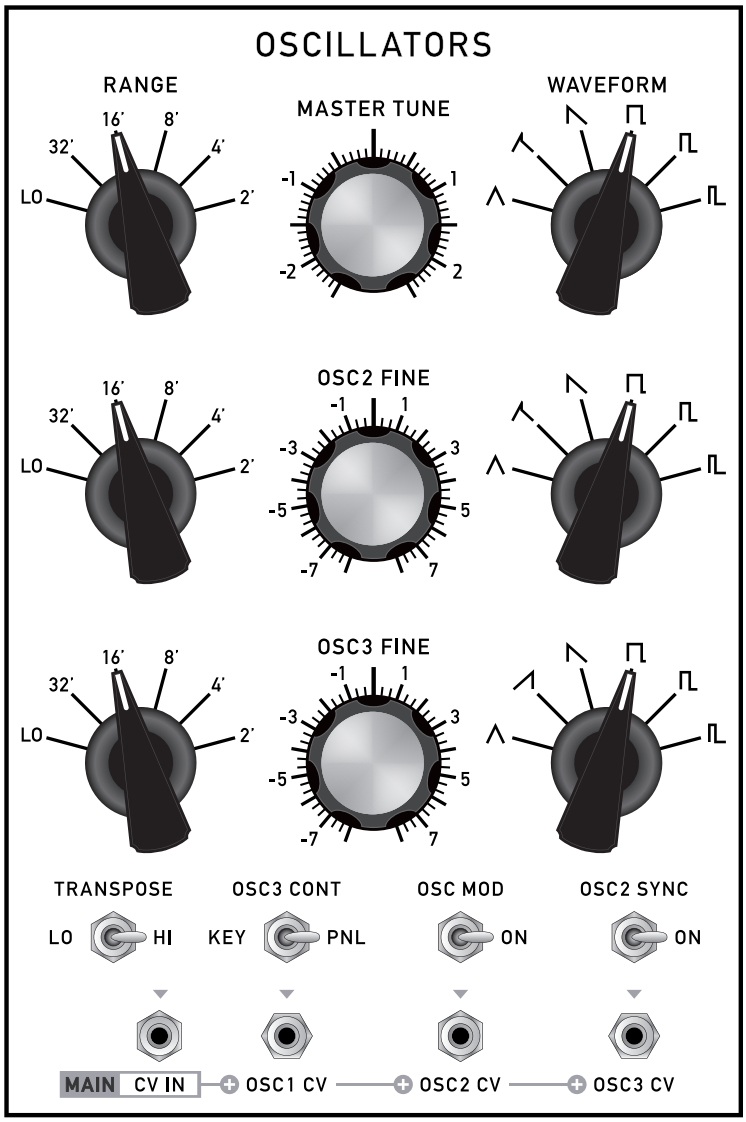
MASTER TUNE

Adjusts the overall tuning for the unit: roughly + and - 7 semitones.

WAVEFORM (x3)

Five position switch selects the **WAVEFORM** to be outputted—all waves are always active.

OSCILLATORS pg. 2



MAIN CV IN

Overall Control Voltage patch point input.

OSC1 CV

OSC1 Control Voltage patch point input (additive).

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OSC2 CV

OSC2 Control Voltage patch point input (additive).

OSC3 CV

OSC3 Control Voltage patch point input (additive).

OSC2 & OSC3 FINE

Appropriately sensitive tuning (±/- 7 semitones) for Oscillators 2 & 3. Easily access the exact and independent phasing or syncing your vision requires.

When OSC3 is not controlled by the keyboard, its FINE range is greatly expanded.

OCTAVE

Three position switch: -1,octave, no change (middle position), +1 octave.

OSC CONT

Toggles between **OSC3's** default East Coast keyboard control: **KEY** and panel control: **PNL**, the latter greatly expanding the oscillator's potential as a tone-shifter, modulator, or a hypno-drone tone. Modwheel functions and settings are not affected.

OSC MOD

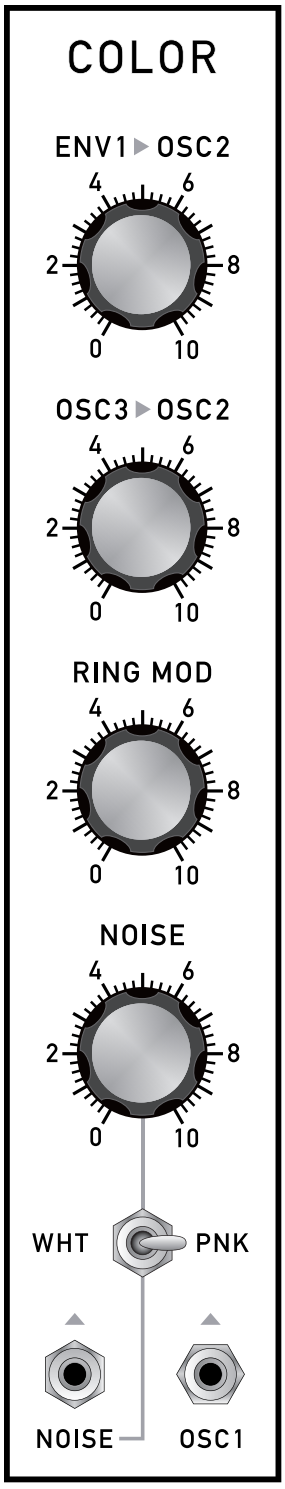
On/off switch for modulation sources coming from the Modmix amplifier—controlled by a MIDI modwheel.

OSC2 SYNC

Locks the pitch of Oscillator 2 to follow the pitch of Oscillator 1 in hard synchronization, so that **OSC2** will tune only to the harmonic frequencies of Oscillator 1. Intermediate frequencies of Oscillator 2 will produce unusual, "metallic" wave shapes and timbres; both Oscillators sharing the same base frequency makes all of this possible.

9d COLOR

Color & Noise Ring



Ring Mod is now served. And it fuses with Cross-Modulation (think ATC-1X) brilliantly. This "module" is where the V30's most sophisticated sound expansion happens, where rich harmonic content gets richer. A patch point for **OSC1** (Oscillator 1) frees Oscillator 1 from the doldrums of its fixed role as the pitch standard bearer, redefining and repurposing the foundation tone as an able audio frequency player.

ENV1 > OSC2

Attenuator for the routing of Envelope 1 to the frequency of Oscillator 2. Formerly labeled as "SWEEP" on the Midimini. Upshot: The filter envelope can modulate the pitch of **OSC2** and filter contour in the strength desired in this Color area, and the Filter/Modifier.

OSC3 > OSC2

Attenuator for the routing of Oscillator 3 to the frequency of Oscillator 2. The Model D sends Oscillator 3 to both the 2nd and 3rd Oscillators in it's OSC 3 CONTROL mode, a feature which yet can be accomplished on our V30 in **CON** using **MODMIX**. The isolation of **OSC2** here in **COLOR** makes for individualized cross-modulation and tonal enrichment.

RING MOD

Sets the mix, or heterodyne* of OSC 2 and OSC 3, and outputs the sum and difference of the frequencies present in each waveform, making it a heroic harmonic thickener and warmer.

NOISE

Noise is useful—there, we've said it—by itself or with a side of Resonance. Synthesize the groove grease, the "frying bacon" of a jazz drummer's somnolent snare brush work, or a punishing thunderstorm. White light is a composite of all colors (as long as it shirks prisms and rainbows), likewise, White Noise is a collective of all frequencies of sound at equal amplitude levels. Because white noise contains all tones, it's the perfect neighbor-noise mask. Pink Noise is every bit as frequency inclusive, but its power per hertz decreases as its frequency increases. Translation: the lower freqs. are louder and more persuasive, and with successive octaves widening—containing more frequencies—Pink Noise boasts equal power per octave, which to most ears sounds dead even, or flat. Your heartbeat is very pink noisy.

WHT - PNK

Three position selects White, Pink, or center off for handy cutoff.

NOISE

White or Pink Noise Output patch point.

The NOISE Generator also pumps out RED NOISE, which is highly low-pass filtered. It pops over to the MOD MIX when PINK NOISE is selected, otherwise PINK noise goes to MODMIX (seems crazy, but that's what the MINI does).

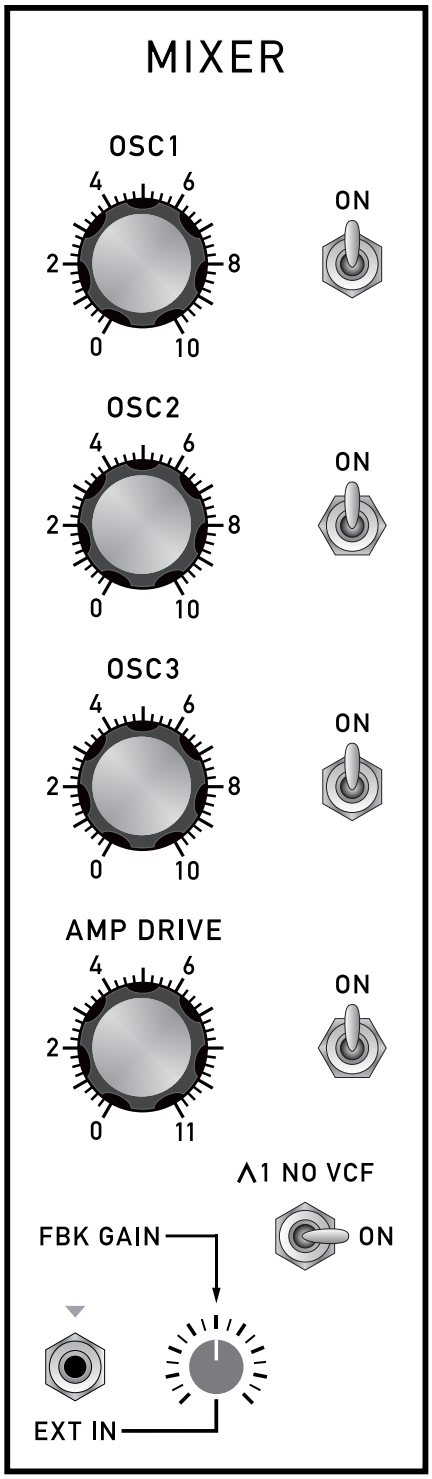
OSC1

Oscillator 1 Output patch point. No longer locked out of the modulation game. Use with abandon.

*Heterodyning is a signal processing technique invented by Canadian inventor-engineer Reginald Fessenden that creates new frequencies by combining or mixing two frequencies.

9e MIXER

Mixing & Driving



Always a good idea with the V30. Set and adjust the Oscillators (x3), amplifier **DRIVE**—tasty to toasty—direct OSC1's triangle wave around the filer, and try to convince yourself that passing an external source through the filter will bring great wealth, and the admiration of peers and strangers alike; it just might. The combined output of the **MIXER** is summed to the Low Pass Filter (which modifies the waveforms significantly), cruises to the **AMP DRIVE** control, finally parking in the **VCA** (Voltage Controlled Amplifier). The above-mentioned ∧1 (OSC's triangle wave) direct connection to the amplifier, a superb bass frequency reviving trick, is the antidote for the speaker and hearing-saving Automatic Gain Compensation (AGM): resonance up=output down, which is happily, absolutely characteristic, and a *mostly* revered design tick of the Mini's 4 pole, **LP** transistor ladder filter. **AMP DRIVE** and its cozy relationship with the amplifier can work compensation wonders here as well.

OSC1
Oscillator 1 attenuator and on/off switch.

OSC2
Oscillator 2 attenuator and on/off switch.

OSC3
Oscillator 3 attenuator and on/off switch.

AMP DRIVE
Our Eurorack AMP module's gorgeous saturation and overdrive imported into V30 world, the difference being, what was once switchable is now adjustable too—and these go to 11. A Finder of Lost (frequency) Loves it is... one of those pot/switches combos likely to be stuck in the **ON** position. And yes, that was a reference to Tony Franciosa's '85 single season, TV drama series.

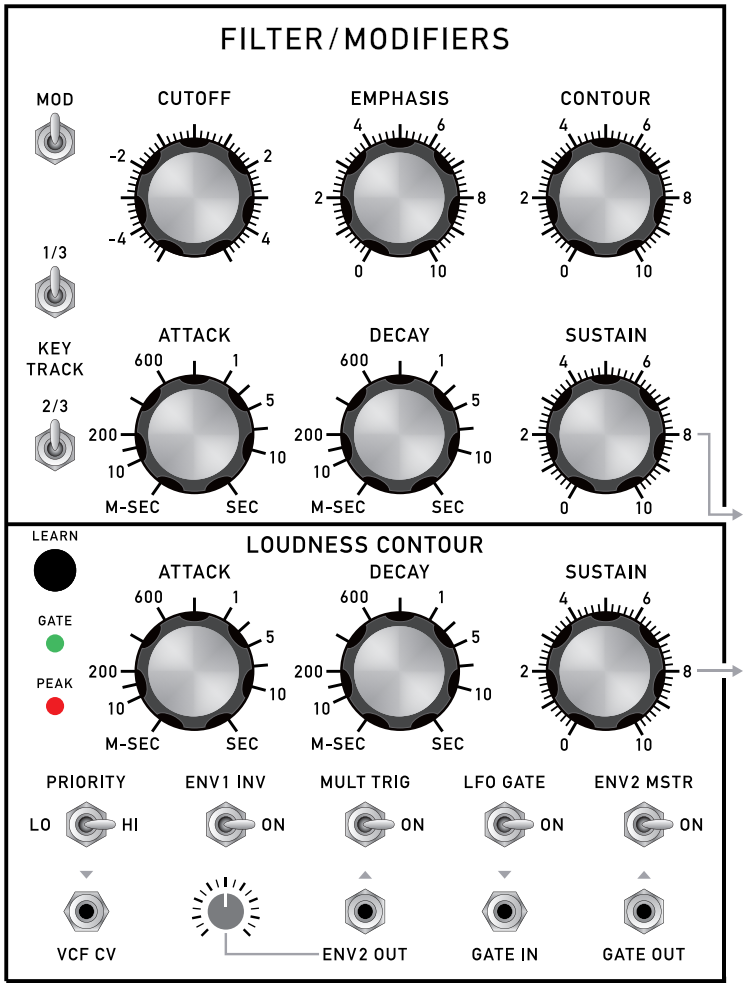
∧1 NO VCF
Wraps Oscillator 1's triangle waveform around filter, for a direct connection with the amplifier, perhaps supplying a remedy for the dropping, emptying bass effect when filter resonance is added for tonal and rhythmic necessities (see above if you haven't already).

FBK GAIN/EXT IN
External audio sources can be introduced to the V30. Pushing the **EXT IN** to 10, will likely overload the **MIXER**; that's where saturation, overdrive, and distortion will settle their differences—or try—as the **PEAK** indicator lamp flashes and glows. **FBK GAIN** (shares a pot with EXT IN), **AMP DRIVE**, and **FEEDBACK** (in **OUT** section) are interrelated, and dependent. Instrument level signals will need pre-amping; all sources require a gate signal generated by MIDI or CV to open the amplifier. Input levels are not affected by the **OUT VOLUME** level.

(EXT IN AMOUNT)
Attenuator for External input.

This is a discreet transistor preamp which feeds the audio mix bus along with the OSCILLATORS, NOISE and Ring Mod. Best to set input level to maximum and adjust source to suit.

9f FILTERS & MODIFIERS



Yes Sir That's My Contour

The Filter attenuates, or truncates the higher frequency components—those which lie above the adjustable cutoff frequency— and passes the lower frequency components of the audio signal. The V30 is fitted with the Midimini's 4 pole **LP** transistor ladder 24 dB per octave filter, with 10Hz-32kHz frequency response. Play, sequence, trigger a note, and harmonic content produced above the Cutoff frequency is reduced by the filter on a 24dB/Octave slope. Everything below gets a hall pass. Is there a synthesizer effect that says Subtractive Synthesis more definitively? Every filter sweep, manual or modulated, recorded or live, screams no sir/ma'am.

MOD

On/off switch for modulation sources coming from the Modmix amplifier, to control the Filter Cutoff—controlled by a connected MIDI modwheel.

CUTOFF

Sets the maximum filter frequency: the lower the cutoff frequency, the less harmonic content the waveform will retain after passing through the filter. A wave shape rounding and smoothing occurs as this cutoff frequency is reduced.

EMPHASIS

Sets the filter Resonance. The resonance, or "Q," emphasizes, or boosts, the cutoff frequency region, making the presence of harmonics more apparent. Self-oscillation as the knob passes the 3 o'clock position, resulting in a pure sine wave and can be used as a separate tone source. Resonance is in fact positive feedback—a signature sound of subtractive synthesis.

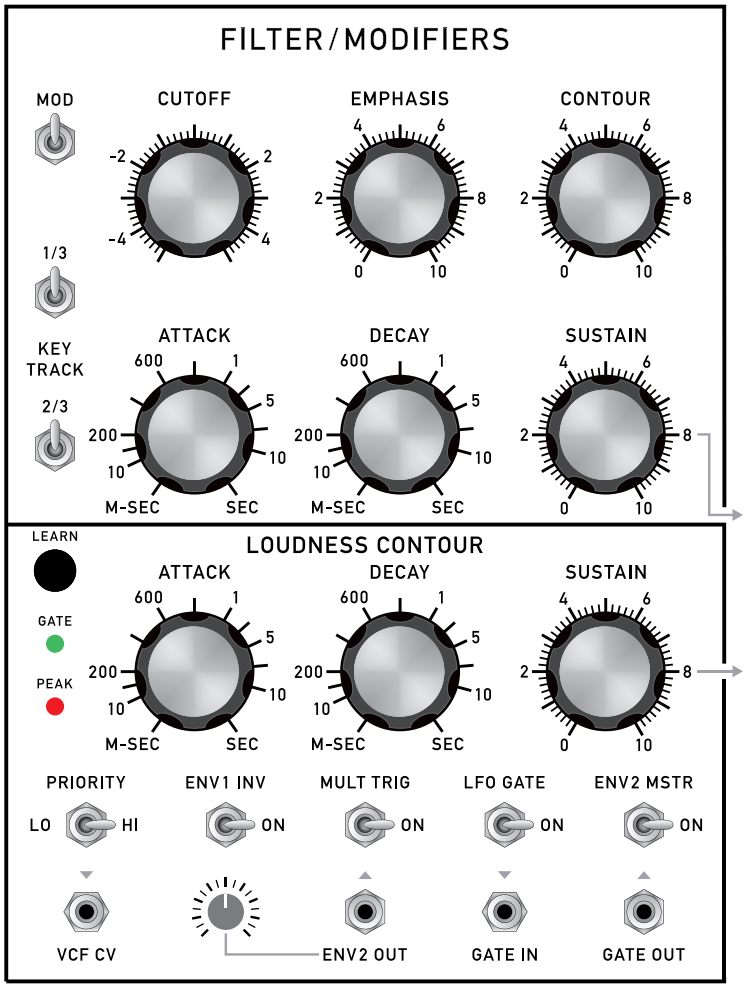
CONTOUR

Sets the depth of the Envelope 1 (filter) modulation amount as it is applied to the filter cutoff frequency. The shape of the filter envelope is determined by the contouring controls attack, decay, sustain, and release. Our **CONTOUR** draws the **CUTOFF** down, an accidental "feature" of the MiniMidi that is actually useful and one of its trademark quirks.

FILTER ENV SERMON: The Filter envelope shapes the timbre and overtone content of the audio signal as it flows from the circuitry of the mixer. This envelope or contour generator is used to dynamically move the cutoff frequency. It works as such: Each time a note or noise is triggered, an envelope or contour generator attached to the Filter's cutoff frequency is actuated, and sends a control signal to the filter. The control signal rises at one rate (attack), falls at a second rate (decay), levels out to a certain point (sustain), and then finally falls off at a third rate (release), determined by the decay stage as it tied to the release stage. Near exact details to follow.

KEY TRACK 1/3 Routes the Oscillator pitch CV to the Filter so the sound will brighten as you play up the keyboard 1/3 strength.

FILTERS & MODIFIERS pg. 2



KEY TRACK 2/3

Routes the Oscillator pitch CV to the Filter so the sound will brighten as you play up the keyboard 2/3 strength.

Combine 1/3 & 2/3 for full tracking—nice filter as Western-tuned Oscillator hack. 2/3 TRACK for the bold.

ATTACK

Sets the **FILTER** Attack time. The **ATTACK** time determines the initial segment of the envelope. The frequency at which the **CONTOUR** begins is determined by the **CUTOFF** setting, while the peak, which it reaches, is determined by the **CUTOFF** and **CONTOUR** amount settings combined. Incrementing the **ATTACK** knob with a healthy **CONTOUR** amount from 1 m-sec to approximately 10 seconds will result in the brightness of the sound increasing sharply at 1st, and then more gradually as the **ATTACK** time lengthens.

DECAY

Sets the Decay time. The **DECAY** time determines the duration of the second segment of the envelope, i.e., the fall from the **ATTACK** peak to the **SUSTAIN** level. When repeatedly triggering a note/noise and increasing the value (with a robust **CONTOUR** amount) from 1 m-sec to approximately 20 sec., you will at 1st hear the brightness drop sharply after the initial **ATTACK**. This drop will become more gradual as the **DECAY** time lengthens.

SUSTAIN

Sets the Sustain level. The **SUSTAIN** level determines the filter frequency at which the envelope holds after the initial rise and fall. The frequency of the **SUSTAIN** level can be as high as the initial peak, which would override the **DECAY** stage, or it can be as low as the frequency at which the envelope **CONTOUR** began. **SUSTAIN** is only active while a note is held. Also, the Mini's envelope has a peak slightly higher then the **SUSTAIN** can reach.

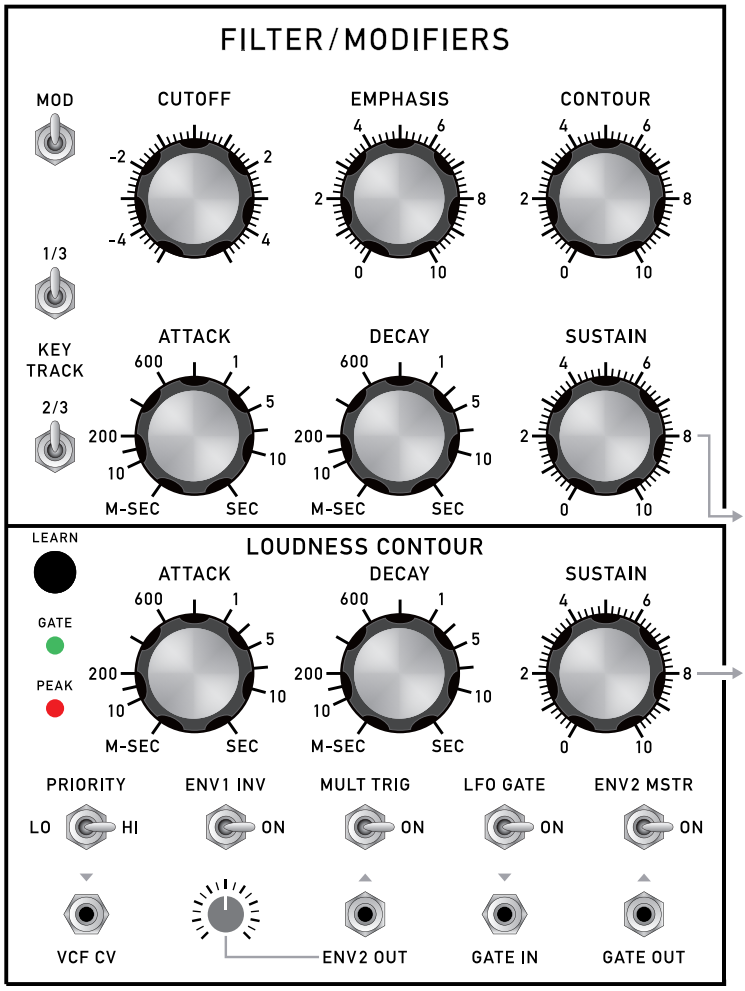
REL (switch located in OUT)

Switches on Release which is governed by the **DECAY** time. Release is the fourth and final stage of the envelope contour: after the initial rise and fall of the **ATTACK** and **DECAY** times to the **SUSTAIN** level, the Release time takes effect after the **SUSTAIN** level segment, when the trigger/key/sequence step/CV command terminates. The frequency at which the **SUSTAIN** level is set then falls to the initial filter cutoff frequency level, at the rate set by the **DECAY** time—**DECAY** being the mind of the afterthought of **REL** (release).

LEARN

Under the hood hub for MIDI Channel, Aftertouch and Modwheel. MIDI: Hold **LEARN** and play a note to select channel. Aftertouch: Hold **LEARN** and move Modwheel to swap to between Aftertouch and Modwheel control of VCF Cutoff—its default setting.

FILTERS & MODIFIERS pg. 3



GATE

Signal indicator light, whether by keyboard, external gate, or the Loudness Contour's **LFO GATE**.

PEAK

Overload light for the External Input circuit.

LOUDNESS CONTOUR

The amplifier envelope or **VCA EG**, is the last word on the V30's synthesis movement through time—the final shape modulator.

ATTACK

Sets the **ATTACK** time (the initial segment of the envelope) for the **LOUDNESS CONTOUR** Envelope Generator. Turning the **ATTACK** knob clockwise from 1 m-sec to full (approximately 10 seconds) starts things out snappily enough, and eventually results in a sound few have the patience to witness: long **ATTACK** synth sounds being as popular as glare.

DECAY

Sets the decay time. The **DECAY** time determines the duration of the second segment of the envelope, i.e., the fall from the **ATTACK** peak to the **SUSTAIN** level. When repeatedly triggering a note/noise and incrementing the value from 1 millisecond to approximately 20 seconds, you will at 1st hear the amplitude drop sharply after the initial **ATTACK**, after which the slope down will become more gradual as the **DECAY** time is increased to the maximum duration.

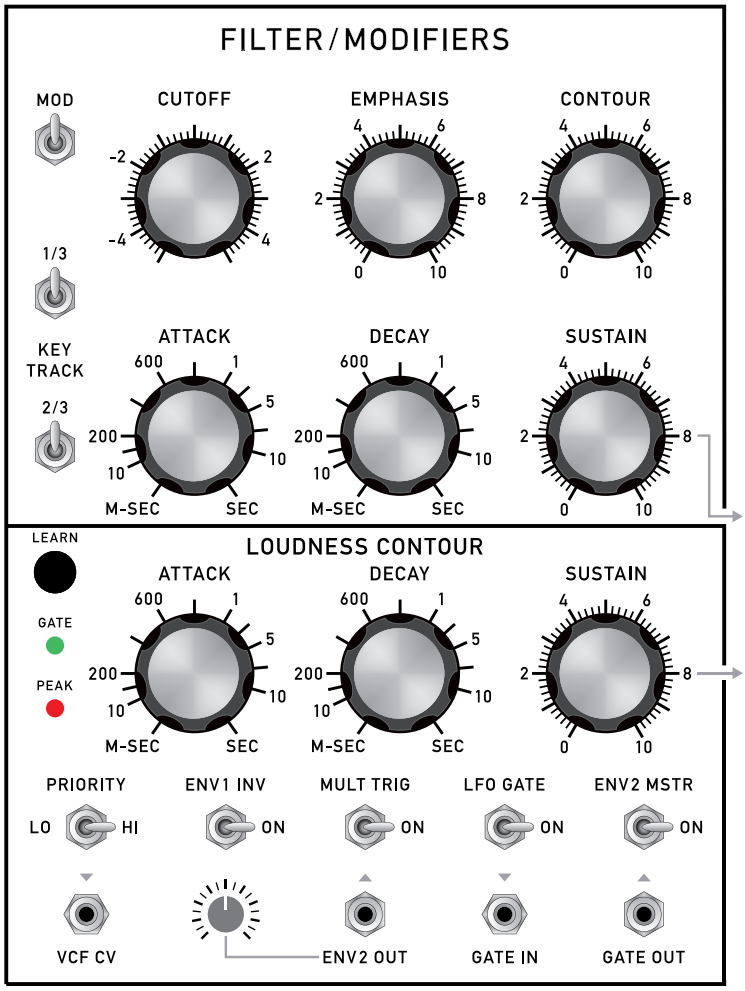
SUSTAIN

Sets the Sustain level. The **SUSTAIN** level determines the amplitude level at which the envelope rests after the initial rise and fall. The amplitude of the **SUSTAIN** can be as high as the initial peak, in which case there is no **DECAY** after the initial rise, or it can be as low as the frequency at which the envelope **CONTOUR** began. **SUSTAIN** is only active while a note is held. Also, the Mini's envelope has a peak slightly higher then the **SUSTAIN** can reach.

REL (switch located in OUT)

Switches on Release which is governed by the **DECAY** time. Release is the fourth and final stage of the envelope contour: after the initial rise and fall of the **ATTACK** and **DECAY** times to the **SUSTAIN** level, the Release time takes effect after the **SUSTAIN** level segment, when the trigger/key/sequence step/CV command terminates. The amplitude at which the **SUSTAIN** is set then falls at the rate set by the **DECAY** time—**DECAY** being the mind of the afterthought of **REL** (release), as **DECAY** and **REL** share the same circuit.

FILTERS & MODIFIERS pg. 4



PRIORITY

Sets the note **PRIORITY. LO**: The Classic Mini mode! Essential for that lazy, hazy, pocketed vibe. **LAST** (middle position)**:** Classic ARP® 2600 sans portamento. Makes playing arpeggios, trills, etc., far less bothersome. **HI:** MiniKorg 700S, the MS20 yo.

ENV1 INV

Inverts (reverses) the direction of the **FILTER** envelope.

MULT TRIG

Single Trigger (left switch position) allows for the continuation of the **DECAY** cycle through a legato, or multi-note phrase. **MULT TRIG** (Multiple Trigger - right switch position) forces the **ATTACK** and **DECAY** cycle of both **ENV1** and **ENV2** to restart with every key press, or note-on command.

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LFO GATE

Directs the Low Frequency Oscillator to trigger the gate of **ENV1** and **ENV2** stat. Amounts can be adjusted in LFO

ENV2 MSTR

Makes **ENV2** modulate both the filter and the amplifier. **ENV1**'s controls are still active in that they can still modulate the frequency of Oscillator 2. To restate for clarity's sake: **ENV2** 's knobs assume the V30's **ATTACK**, **DECAY**, **SUSTAIN**, and **REL** values for both filter and amplifier: a tidy and retro sound that brings to mind certain beloved analog keyboards from the '80s.

VCF CV

Voltage Controlled Filter Control Voltage Input patch point.

(ENV2 AMOUNT)

Output Attenuator for the **ENV2 OUT** jack.

ENV2 OUT

Envelope 2 Output patch point.

GATE IN

Gate Input patch point.

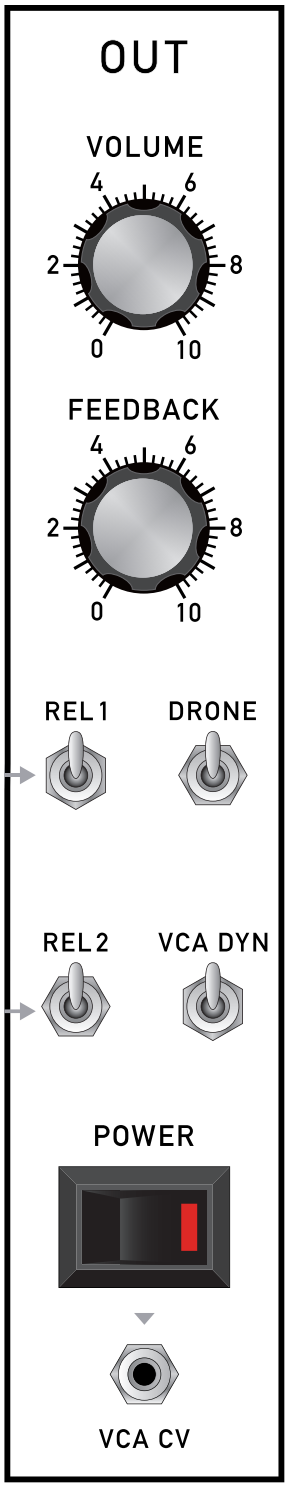
GATE OUT

Gate Output patch point.

Excellent Priority/Vintage Mono Synth read here:
https://www.soundonsound.com/techniques/priorities-triggers

9g OUT

The Finisher King



Turn up, turn down and feed back, or Drone on and on. You just keep on trying.

VOLUME
Sets the final gain stage.

FEEDBACK
Sets the level of positive feedback (Drew Neumann Speak). A feature similar to this was the best trick of the old Mini: Running the unit back into itself, Low Output to the External Input preamp which fed that sweet preamp saturation/distortion into the filter. We have optimized and fine-tuned that rumbling sound of the D, widening the tonal range and usefulness dramatically. Not your dad's feedback loop anymore... It screams 11. Best thing? No need to reach for the back of the unit, and wrangle with the loom; it's done. Our mod. possesses all the warmth of the original but opens up a wonderland of richly variable tone. Note: In the '30, our **FEEDBACK** control is affected by the **FBK GAIN** / **EXT IN** pot which must be set to a positive value for **FEEDBACK** to be heard**,** being its gain control; however, **Feedback** and external signal processing can be done simultaneously. So loop and external can swing at the ball.

REL1
Envelope 1 (filter) Release stage is activated when switch is in its up position. Release amount determined by **ENV 2 DECAY** value.

.

DRONE
The last note received by the V30—MIDI or CV—is indefinitely sustained, when switch is in its up position. **VCF** is not affected by **DRONE**, so Cutoff may need to be increased when using it.

REL2
Envelope 2 (amp) Release stage is activated when switch is in its up position. Release amount determined by **ENV2 DECAY** value.

VCA DYN
The velocity of the last received note will affect the amount of **ENV2** to the VCA, hence the loudness, should you choose to accept it.

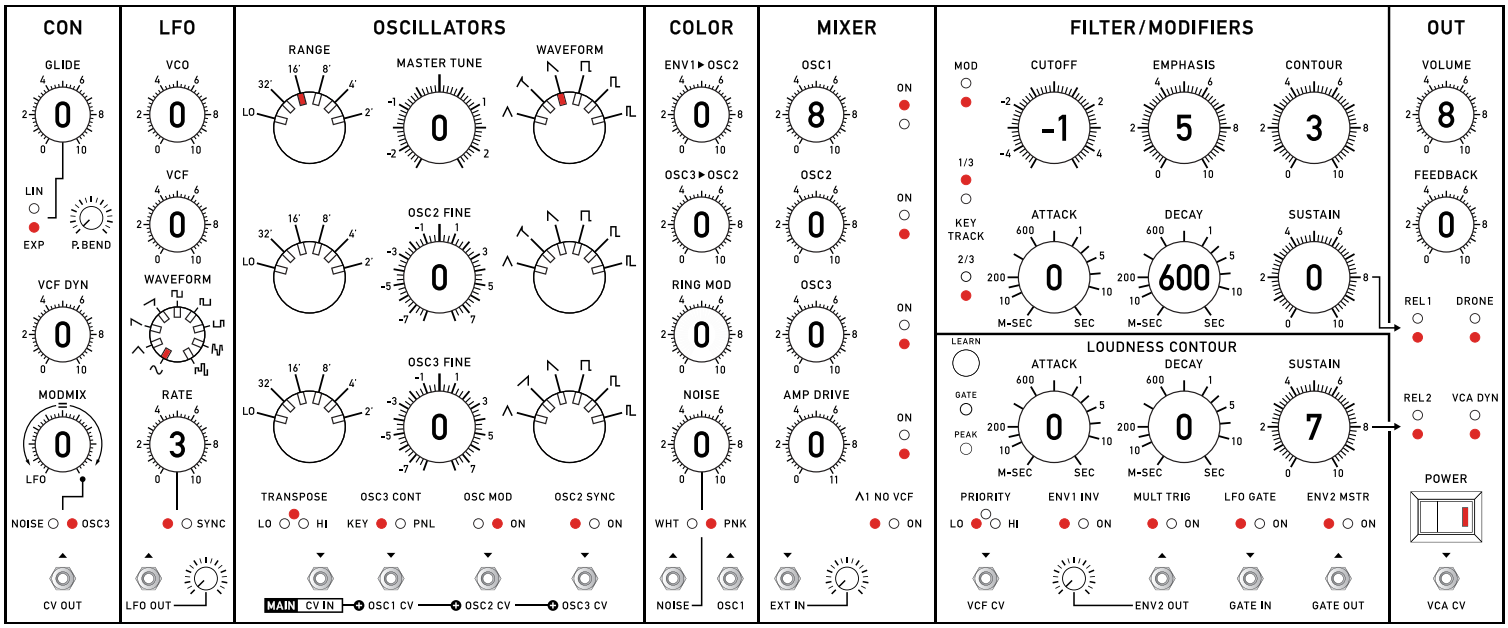
VCA CV
Voltage Control patch point which disconnects/defeats **ENV2**, surrendering complete control of the VCA to the patched source.

POWER
Green light go.

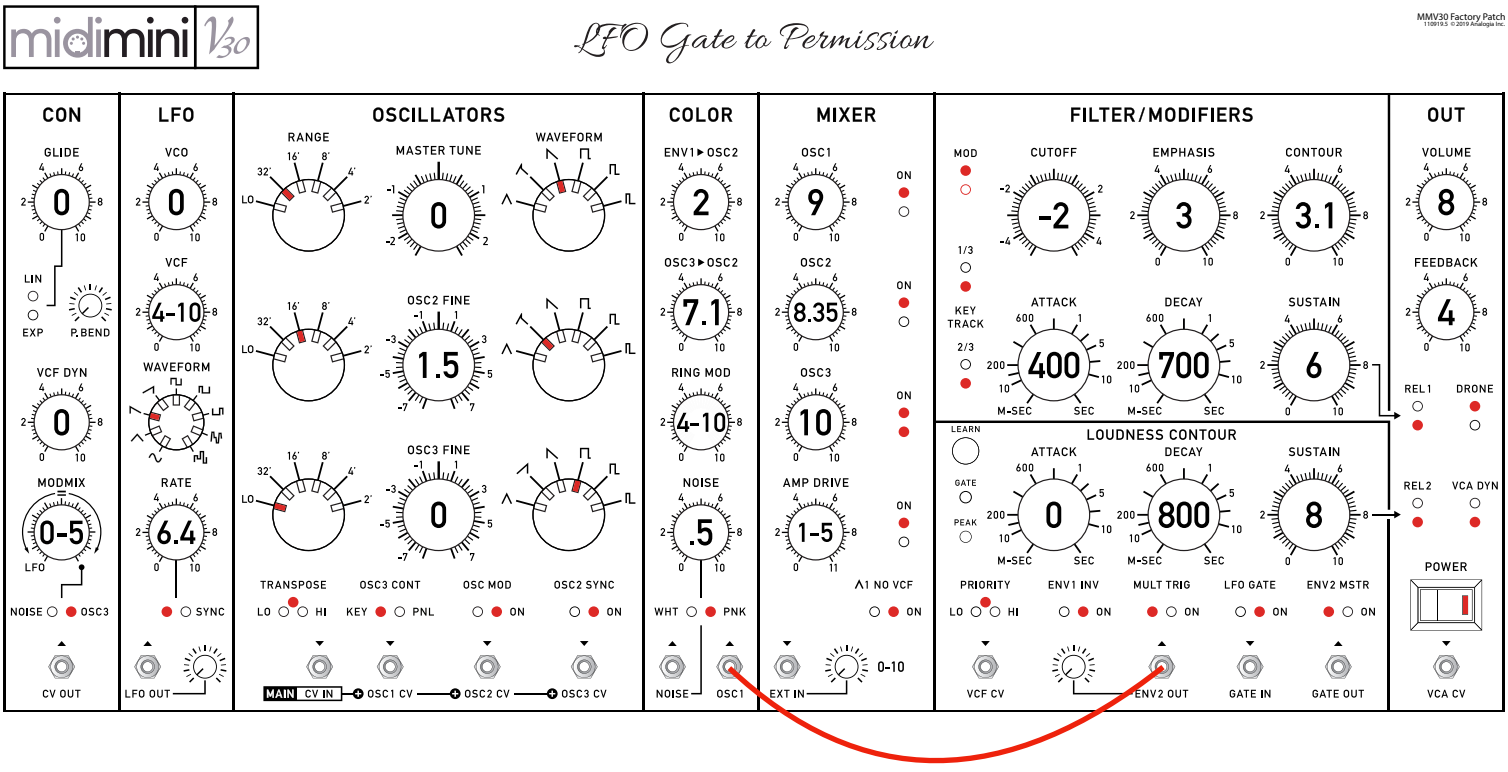
💡 **Using REL2 without REL1 is a really effective way of creating a more interesting release contour.**

10 FACTORY PATCHES

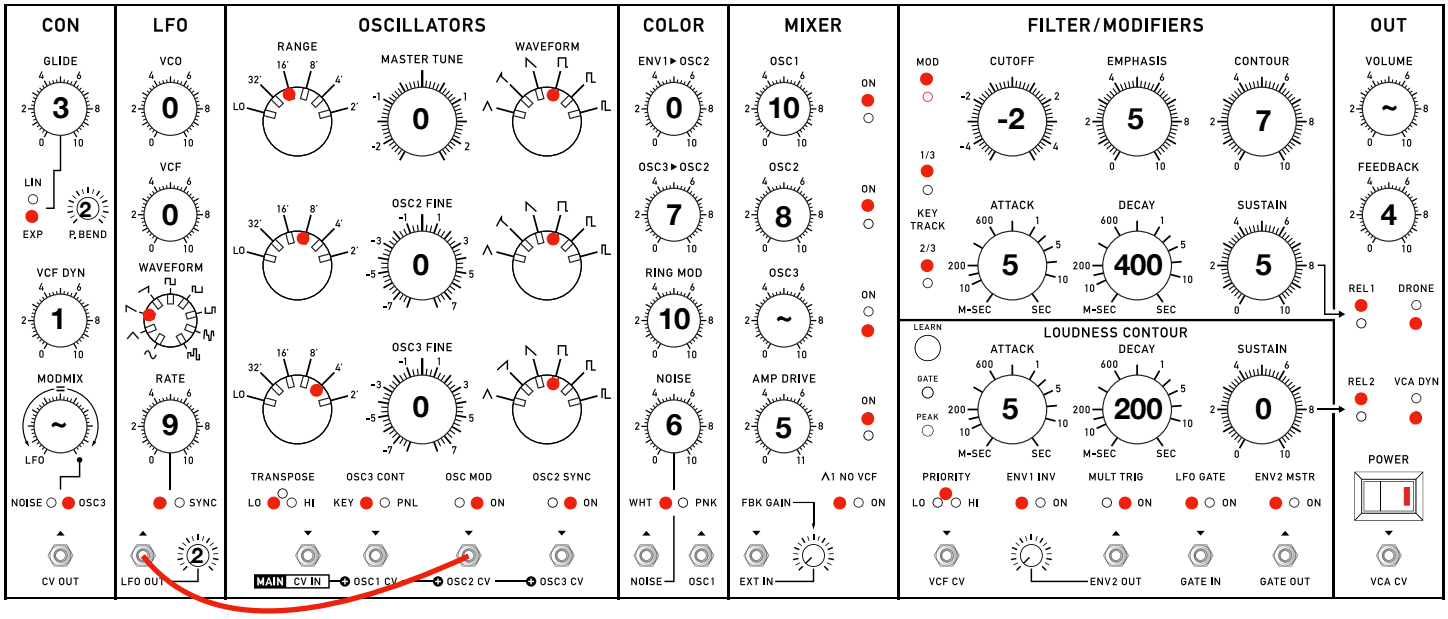
GSR's Simple Bass



LFO Gate to Permission

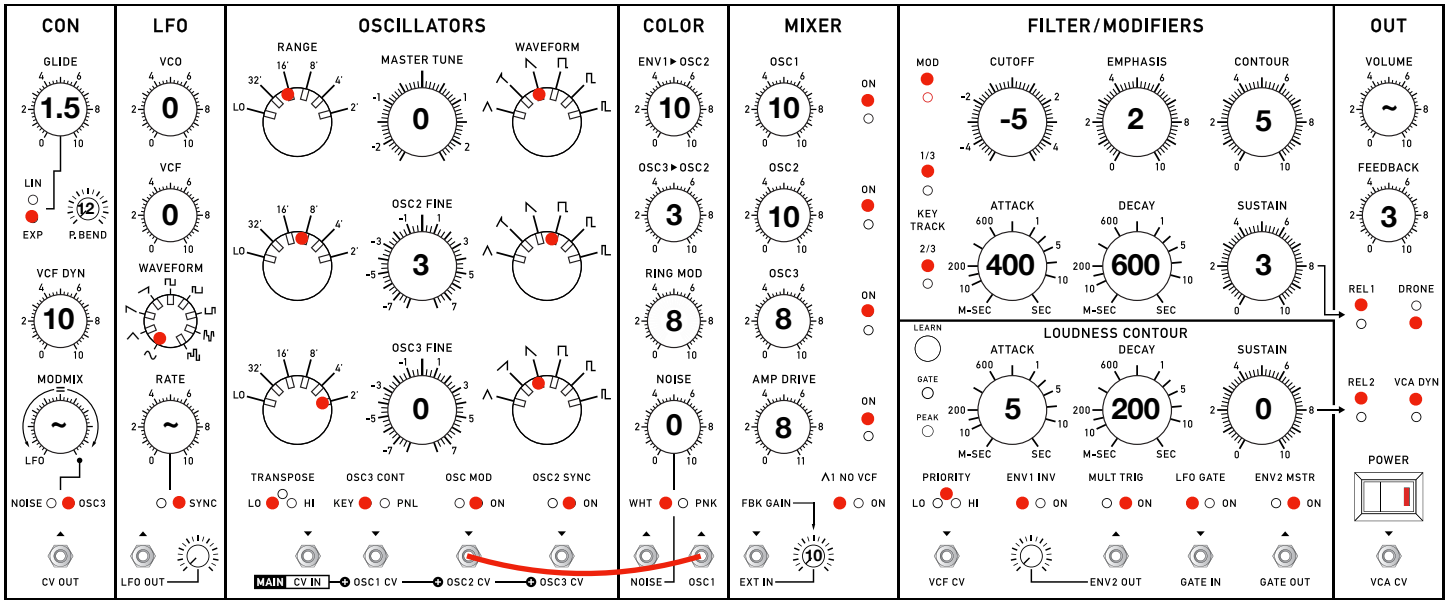


Aggronomic Bassline



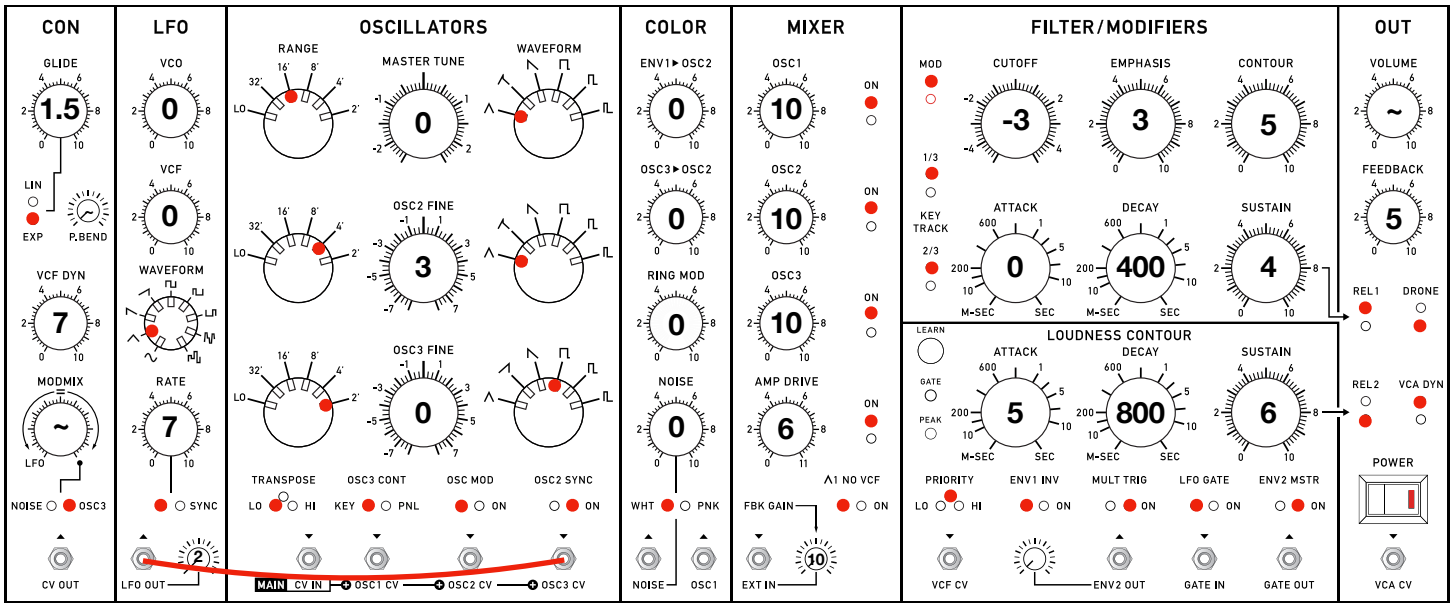
This patch is loaded with harmonics that sound more like wavetable oscillators than analog VCO's! **OSC3 > OSC2** Cross Mod plus **RING MOD** provide plenty of extra harmonic content. Patch **LFO OUT** to **OSC2 CV** input for a small amount of vibrato for added complexity. Adjust the Oscillator ranges and wave shapes to get different timbres.

The Controllers Lead - You're Synced



Classic VCO Sync with a twist!
Enable **OSC2 SYNC** with **ENV1 > OSC2** pitch to taste. Envelope 1 is controlling the shape of the sync effect, and Envelope 2 is shaping both the VCA and Filter. Patch **OSC1** to **OSC3** input for wonderful sounding FM. Mix in **RING MOD** for some added metallic harmonics. Even adding a small amount of **OSC3 > OSC2** Cross Mod will bring more life to the sound. Make it scream by adding in **AMP DRIVE**, **FBK GAIN**, and/or **FEEDBACK**.

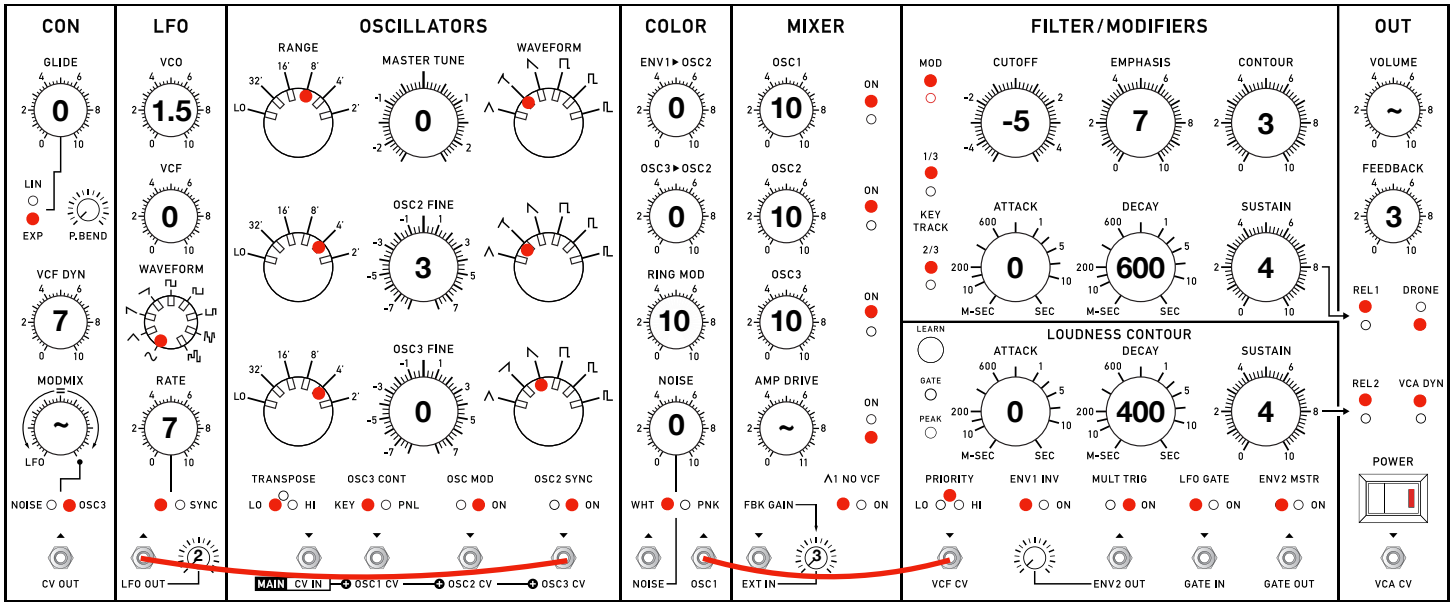
Triangled to Perfection



Over the top Triangle destruction!

Using **FEEDBACK**, **FBK GAIN**, and **AMP DRIVE** to destroy two triangle waves. Adjust distortion levels to taste, and notice how the **FBK GAIN** responds almost as another resonant filter sweep. **VCO3** as a high octave square wave helps fill out the top end of the sonic spectrum, with a hint of vibrato by patching **LFO OUT** to **OSC3 CV**. **OSC 2 SYNC** is enabled to lock the pitch of the two triangle waves, allowing for more ‘musical’ distortion.

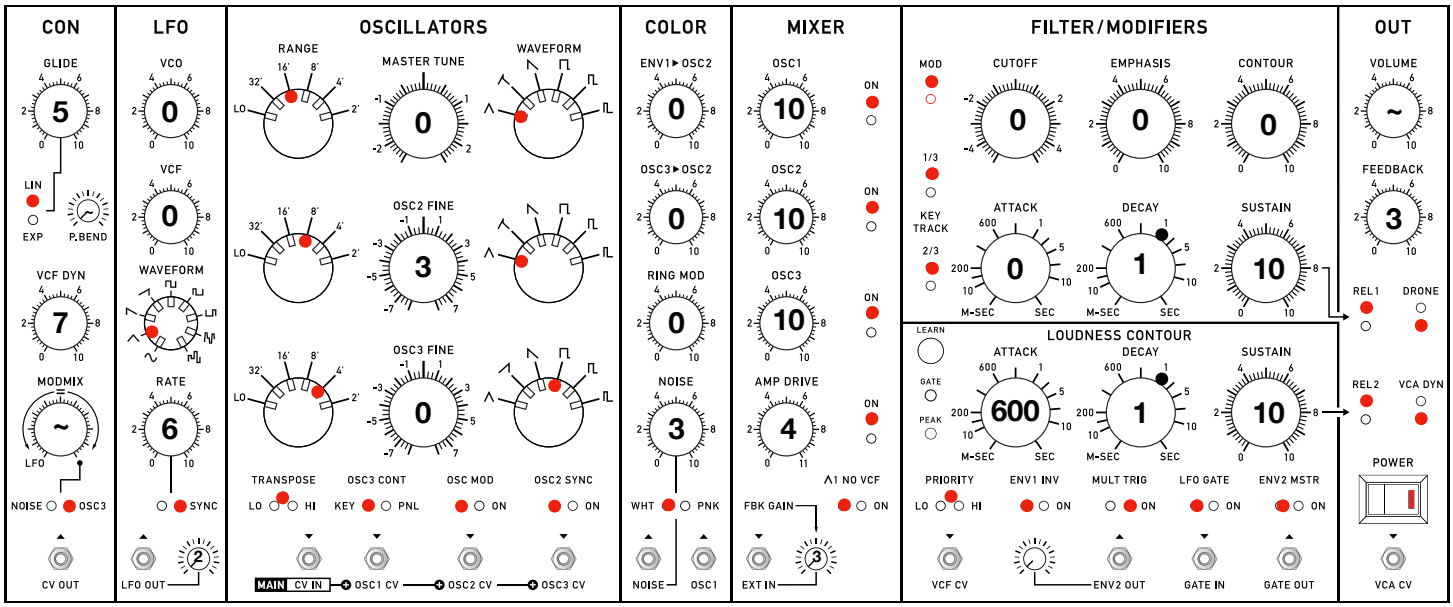
Sharktooth Gritty



This shark bites (badum tss)!

OSC 1 output to **VCF CV** input for some wonderfully gritty filter FM. **OSC1** and **OSC2** are both shark tooth waveforms for some rich yet smooth low end. Don’t forget the **RING MOD**. This allows some more controlled filter shaping-Add slight filter attack for a softer feel. Slight global **LFO** to **VCO** gives a little added thickness, plus **LFO OUT** to **OSC 3 CV** input provides some additional vibrato just on OSC 3. How could you not add a little **FEEDBACK**?

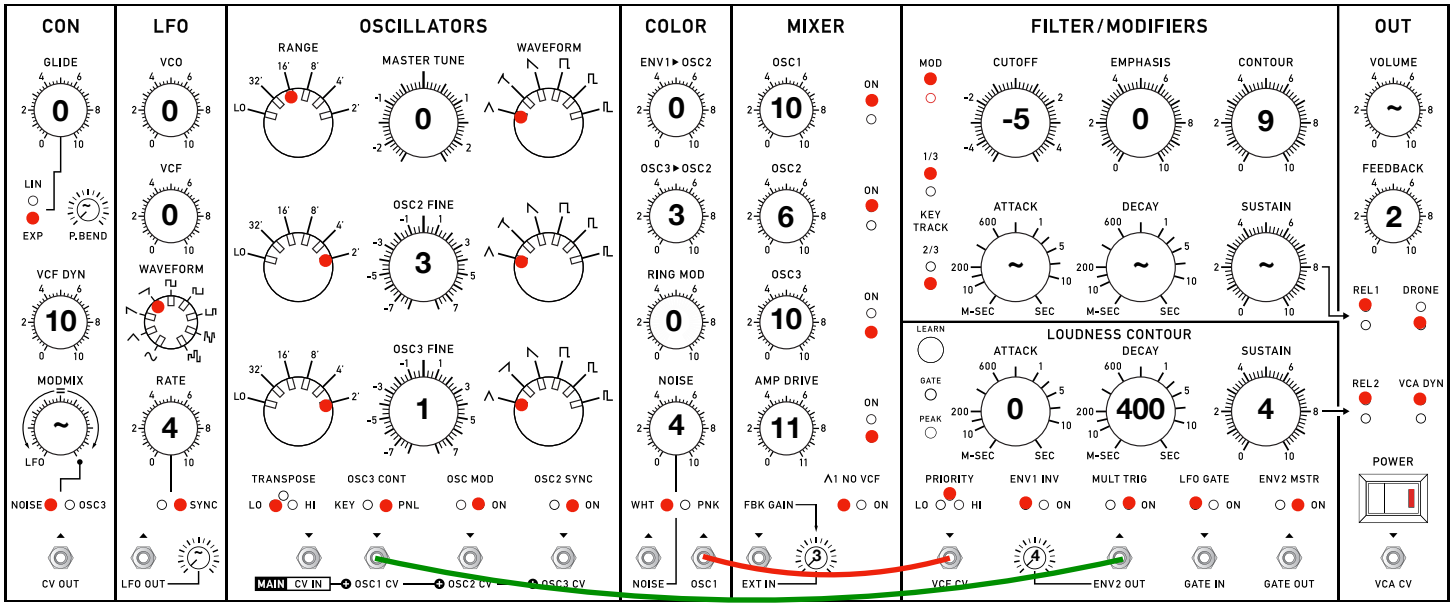
4th Wobble Bass



It's THAT famous bass sound!

4th Bass by detuning **OSC 2** +4 Semitones. **OSC 3** is optional, but in this case +2 Semitones and 2+ octaves above OSC 1 for some added timbre. **LFO SYNC** is enabled with a rate of ~6.5 for a triplet feel when **LFO VCF** is applied. **GLIDE** with **LINEAR** curve highly recommended for those dramatic note glides. Adjust **FEEDBACK**, **FBK GAIN**, and **AMP DRIVE** to taste. ~600ms of ATTACK for amp envelope a great starting point.

The Impossible Drum 'Kit'

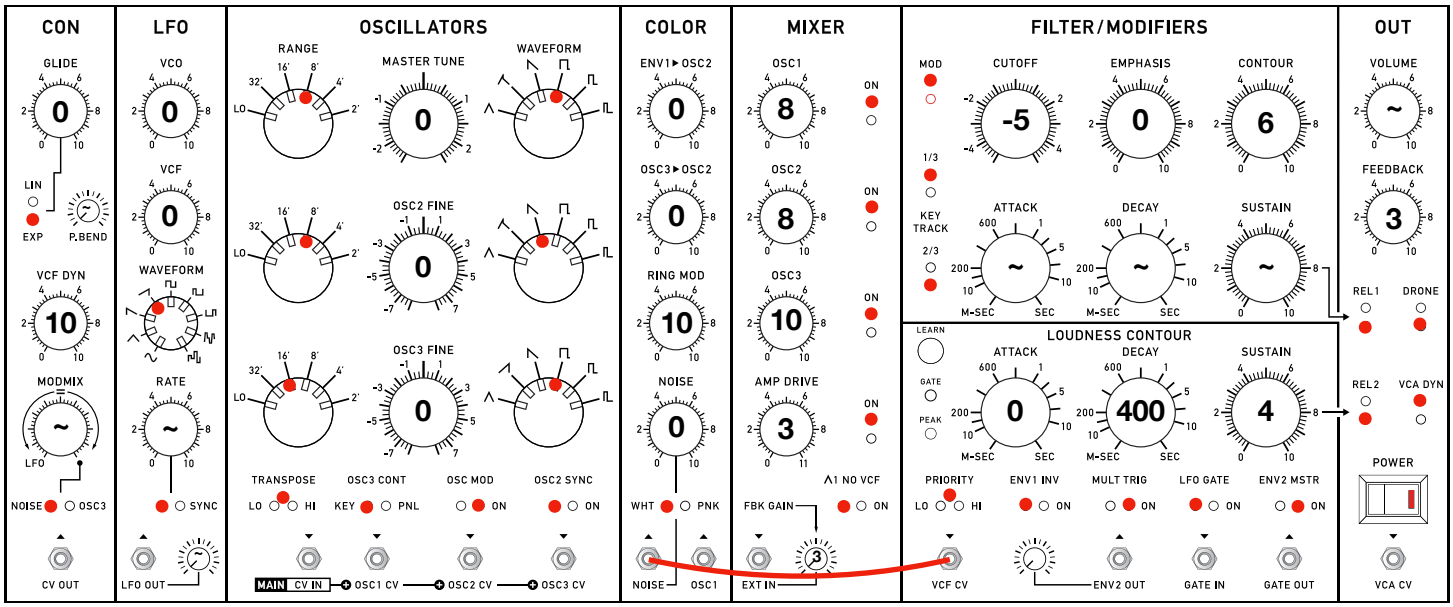


External automation of the Modulation wheel depth and LFO Sync are critical components to this complex 'kit'. **ENV2 OUT** to **OSC1 CV** in gives you a kick / tom sound depending on the note. **VCF DYN** + **KEY TRACK** allows different velocities and higher pitched notes to open the filter, letting more noise through. **LFO SYNC** is enabled at a 1/2 bar resolution with reverse saw waveform, making the **LFO VCO** and **LFO VCF** knobs sound like drum fills. **RING MOD** and **OSC>OSC2** Xmod. Note #, Velocity, and Mod wheel depth will have remarkable timbre changes!

midimini V30

Natural Variability

MMV30 Factory Patch



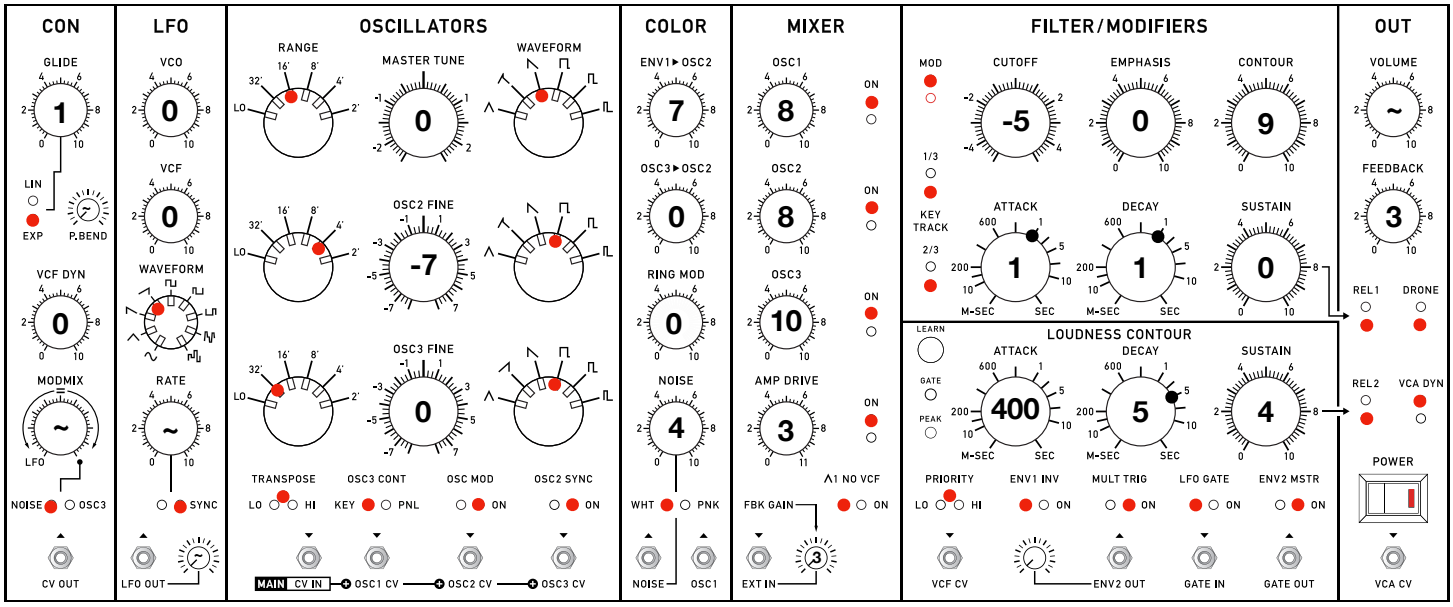
Fat clean bass patch that goes from mild to wild!

Use **NOISE** output to **VCF CV** input for a little white noise filter FM. **RING MOD** really adds some wonderful movement to the sound. The **VCF DYN** is turned up to give velocities a different **CONTOUR** amount for some a ‘natural’ variation sound. As you open the filter you can really hear that distortion taking over. Simple yet wonderful.

midimini V30

Plastic Synco Band

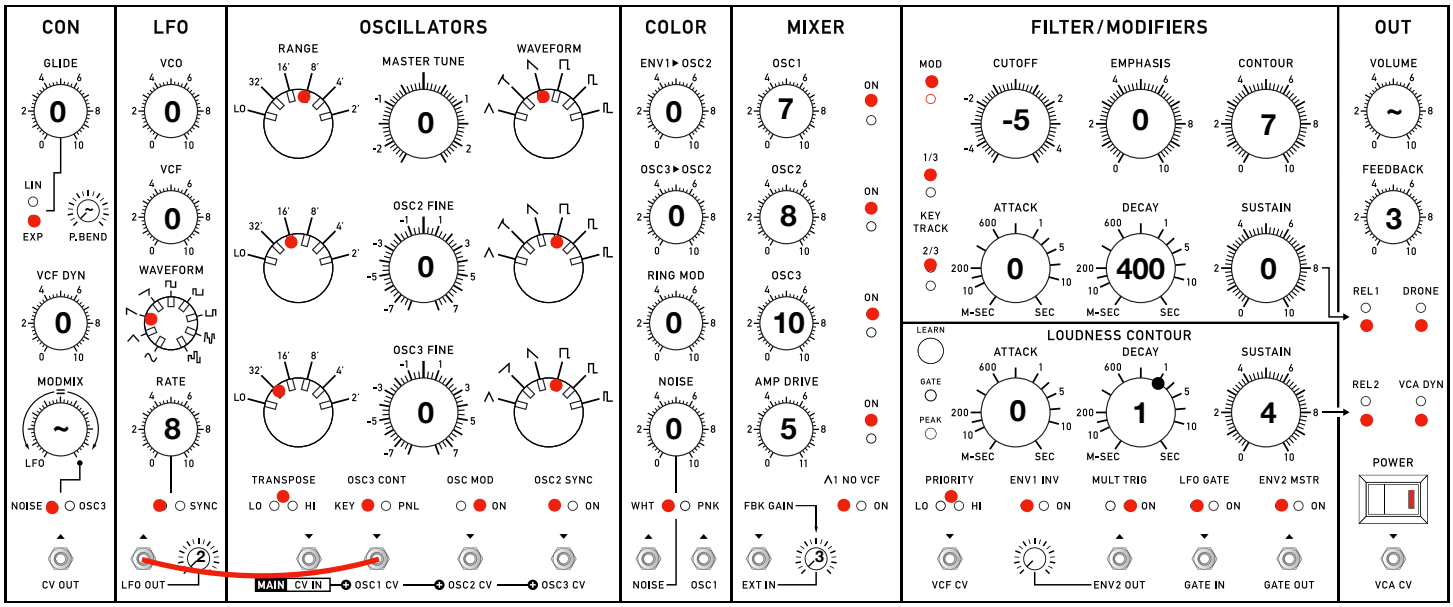
MMV30 Factory Patch



The V30 has a wonderfully rich and full sync sound!

With ENV2 MSTR enabled, the filter CUTOFF is controlled by the Amp envelope. This allows you to perfectly dial in shape of the Sync ‘effect’ with th**e ENV1 > OSC2** amount knob, also use said knob to control the amount depth. Tweak the **OSC2 FINE** knob to adjust the timbre in real time for extra variety.

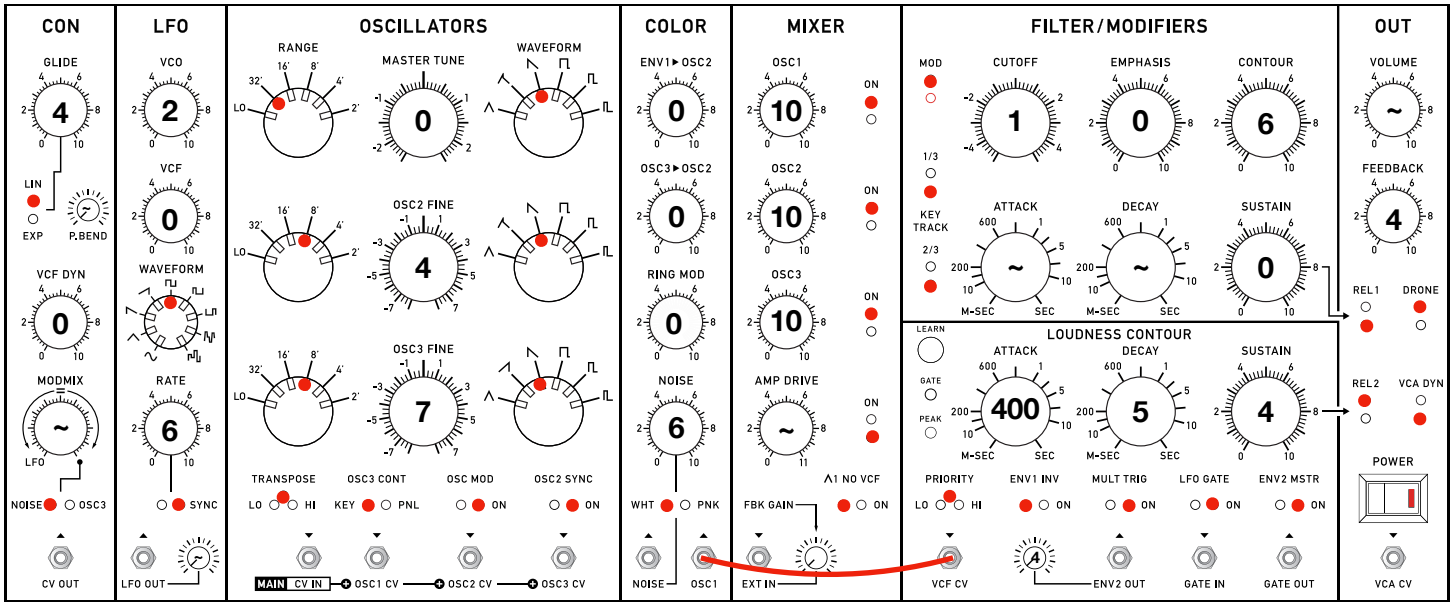
Plucked With You (Arp)



Snappy envelopes in action!

This patch is quite simple with only the **LFO OUT** being patched to the **OSC1 CV** input. The LFO rate is very fast, giving OSC1 a bit of an aggressive overtone to the patch once switched on. This patch makes for a wonderful arpeggio sound and manual control of the glide can really make it interesting.

Dreamy Droney Chordial



Tune all 3 VCO's into a chord!

Enable **DRONE** and have **LFO SYNC** is enabled, using a Square wave. Then the **LFO VCO** amount is carefully turned to ~2, which will give you an octave interval. Set the **GLIDE** to best match the tempo of your project. The **CONTOUR** with a slow **DECAY** works well for single notes every ~2 measures. Use white noise to taste. Patch the **OSC1** output to the **VCF CV** input and crank up the **EMPHASIS** to take this patch into FX territory.

midimini V30

Patch Name:

Track:

Date:

CON

GLIDE

LIN

EXP

P.BEND

VCF DYN

MODMIX

LFO

NOISE OSC3

CV OUT

LFO

VCO

VCF

WAVEFORM

RATE

SYNC

LFO OUT

OSCILLATORS

RANGE

MASTER TUNE

WAVEFORM

OSC2 FINE

OSC3 FINE

TRANSPOSE

LO HI

OSC3 CONT

KEY PNL

OSC MOD

ON

OSC2 SYNC

ON

MAIN CV IN

OSC1 CV

OSC2 CV

OSC3 CV

COLOR

ENV1▶OSC2

OSC3▶OSC2

RING MOD

NOISE

WHT PNK

NOISE

OSC1

MIXER

OSC1

OSC2

OSC3

AMP DRIVE

ON

ON

ON

ON

⋀1 NO VCF

FBK GAIN

ON

EXT IN

FILTER/MODIFIERS

MOD

1/3

KEY TRACK

2/3

CUTOFF

EMPHASIS

CONTOUR

ATTACK

DECAY

SUSTAIN

M-SEC SEC

LEARN

GATE

PEAK

LOUDNESS CONTOUR

ATTACK

DECAY

SUSTAIN

M-SEC SEC

PRIORITY

LO HI

ENV1 INV

ON

MULT TRIG

ON

LFO GATE

ON

ENV2 MSTR

ON

VCF CV

ENV2 OUT

GATE IN

GATE OUT

OUT

VOLUME

FEEDBACK

REL 1

DRONE

REL 2

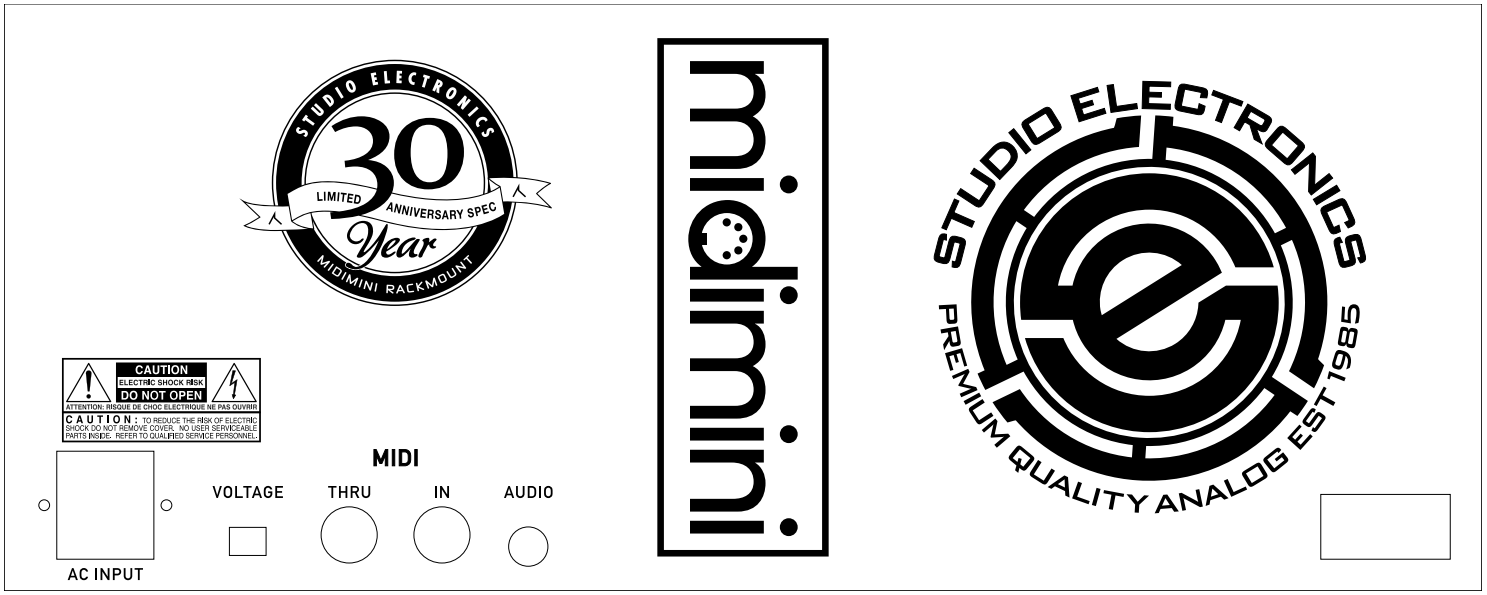
VCA DYN

POWER

VCA CV

12 BACK PANEL

Power (& AUDIO/MIDI) to the Panels



AC INPUT
Plug in female end of supplied IEC cable to unit and male, end to power socket.

VOLTAGE
The V30's regulated supply can operate on either 115 volt or 230 volt AC line voltage, selected by this rear panel, fused-protected switch. **Be aware of your countries' power requirements, and set it accordingly!**

MIDI

💡 **This Plug, Socket & Voltage by Country Page should be of assistance (not being its creators, we cannot assume any responsibility or liability related to the accuracy or inaccuracy of the information provided).**

IN
Receives MIDI Notes, MIDI Volume, Velocity, Pitch Bend, Aftertouch, Mod Wheel and Sustain Pedal, Glide on/off , and Glide.

THRU
Forwards the signal arriving at the **MIDI IN** jack, passing it to additional connected **MIDI** equipment.

AUDIO
Get discrete Analog sound alchemy here. Connect a 1/4" to 1/4" audio cable to this jack and then to the line input of a mixer, audio interface, keyboard amplifier, etc.

13 GLOSSARY OF ABBREVIATIONS

CON: Control (section)

CONT: Control (feature)

CV: Control Voltage

DYN: Dynamics

EG: Envelope Generator

ENV: Envelope

EXP: Exponential

EXT: External

IN: Input

KEY: Keyboard

LFO: Low Frequency Oscillator

LIN: Linear

LP: Low Pass

M-SEC: Millisecond

MOD: Modulation

MODMIX: Modulation MIX

MSTR: Master

MULT: Multiple

OSC: Oscillator

OUT: Output

P. BEND: Pitch Bend

PNK: Pink

PNL: Panel

REL: Release

SEC: Second

SYNC: Synchronisation

VCA: Voltage Controlled Amplifier

VCF: Voltage Controlled Filter

VCO: Voltage Controlled Oscillator

WHT: White

14 PATCHING

The V30 patch points... nothing can hurt anything. We've patched everything everywhere, with often pleasant unexpected results—out-to-outs as well—maybe we missed a combination/destination you might discover. Jack in external sources as modulators. Process and warm diverse audio sources. With an external sequencer you can extract a paraphonic response from your prized Midimini V30, addressing the individual Oscillator CV Inputs with abandon, or great care. **HAVE FUN EXPERIMENTING!**

PATCH POINTS

- **CV OUT** – Control Voltage Output patch point.
- **LFO OUT** – Low Frequency Oscillator Output patch point with attenuator. Patch into **ENV OUT** with both level controls at maximum for a sucking, release heavy transient.
- **MAIN CV IN** – Master Control Voltage Input patch point.
- **OSC1 CV** – OSC 1 Control Voltage input patch point (additive). Patch an external sequencer for expressive paraphonic control.
- **OSC2 CV** – OSC 2 Control Voltage input patch point (additive). "
- **OSC3 CV** – OSC 3 Control Voltage input patch point (additive). "
- **NOISE** – Noise Output patch point. Patch into **GATE OUT** for a reverse transient effect—adjust level control.
- **OSC1** – Oscillator 1 Control Voltage Output patch point. Patch into **ENV OUT** with both level controls at maximum for a sucking, release heavy transient variant.
- **EXT IN** – External Audio Input with attenuator. Give it a nice hot signal and pulse it with a sequence, or flip on the **DRONE** switch for a steady stream of sound.
- **VCF CV** – VCF Control Voltage input patch point. Patch OSC1 into **VCF CV** for AFM via **OSC 1**, or into the individual **OSC CV** Inputs for more of the same.
- **ENV2 OUT** – Envelope 2 Output patch point with attenuator.
- **GATE IN** – Gate Input patch point.
- **GATE OUT** – Gate Output patch point (8.2 volts).
- **VCA CV** – Voltage Controlled Amplifier Control Voltage Input patch point.

We'll update this page as we uncover more patching secrets.

15 MIDI DOCUMENTATION / ASSIGNMENTS

MIDI Implementation Chart

	Function	Transmitted	Recognized	Remarks
Basic Channel	Default Changed	x x	1-16 1-16	Memorized
Note Numbers	 : True Voice	x x	o 0 -127	
Velocity	Note On Note Off	x x	o o	VCF Contour & VCA Volume*
Aftertouch	Key Channel	x x	x o	Defaults to Filter Cutoff**
Pitch Bend		x	o	
Control Change	1 5 7 64 65	x x x x x	o o o o o	Modulation Wheel Portamento Time Channel Volume Sustain Pedal Portamento On/Off
System Real Time	: Clock : Start : Continue : Stop	x x x x x	o x x x x	LFO MIDI Sync

* Velocity to VCF is attenuated in **CON — VCF DYN**; a fixed velocity amount is switchable to VCA in **OUT — VCA DYN**.

** Can be swapped with Modwheel.

0=Yes
X-No

LFO & MIDI Assignments

LFO			
Oscillator 1&2 frequency, VCF frequency			
DYNAMICS	MODWHEEL	AFTERTOUCH	BENDER
VCF Contour, VCA Volume	Osc 1 & 2, VCF frequency	VCF Cutoff, Modwheel	Oscillators 1, 2, 3

November 15, 2019 - Version 1.0

16 TROUBLESHOOTING

No Sound

Check all audio connections.
Check all MIDI connections—make sure the V30 is set to receive on the correct channel. [see **LEARN** p. 22]
Reset Patch. [see **RESET PATCH** p. 12]
Turn up OUT Volume. [see **VOLUME** p. 25]
Turn up MIXER OSC levels. [see **MIXER** p. 20]
Turn off MIDI sync. [see **LEARN** p. 22]
Turn off LFO GATE. [see **LFO GATE** p. 22]

Soft Sound

Check all audio connections.
Turn up OUT Volume. [see **VOLUME** p. 25]
Turn up MIXER OSC levels. [see **MIXER** p. 20]

Unwanted Distorted Sound

Set **AMP DRIVE** and **FEEDBACK** to 0. [see pp. 20 & 25]

Unwanted Noise

Don't be tasty with **FEEDBACK**, its lowest settings can add noticeable hash. [see **OUT** p. 25]

Unwanted Sustaining Sound

Turn of **DRONE**. [see p. 25]

Out of Tune

Set **MASTER TUNE** to 440 Hz. [see p.17] Or one could experiment with 432 Hz, as was done here with our Boomstar SEM: **https://tinyurl.com/tha942f**

Plain Lost

Reset Patch. [see **RESET PATCH** p. 12]

17 SPECIFICATIONS

SYNTHESIZER TYPE
Semi-Modular Monophonic Rackmount Analog

SOUND ENGINE
Discrete Analog
Triangle, Sharktooth, Sawtooth, Reverse Sawtooth, Square, Wide Rectangle, Narrow Rectangle Waveforms
Additional Digital LFO can be used as an Oscillator

SOUND SOURCES
3 Analog Oscillators
with 8 selectable Waveforms
Noise Generator - White, Pink
Digital Audio Frequency Rate LFO

FILTER
Voltage Controlled Low Pass Ladder Filter - 10 Hz to 20 kHz Range
24 dB per Octave Slope
Key Tracking, Self-Oscillating Resonance (at Cutoff Frequency)
Voltage-controlled Cutoff Frequency

AMPLIFIER
Loudness Contour with a Dynamic Range of: 81 dB?

CONTOUR GENERATORS
2 ADSR Envelopes, Filter and Amplifier

MOST MODULATION SOURCES
2 Analog Modulation Oscillators (1&3)
Triangle, Sharktooth, Sawtooth, Reverse Sawtooth, Square, Wide Rectangle, Narrow Rectangle Waveforms
2 Four-Stage (ADSR) Envelope Generators
AFM Digital LFO with 9 waveforms
Sine, Triangle, Reverse Sawtooth, Sawtooth, Square, 10% Square, 90% Square, Slew Random, Random
MIDI Sync
LFO Output
Noise

GLIDE
Software - Attenuated Linear and Exponential

ADDITIONAL COLORATIONS
Cross Mod, Ring Mod, Amp Drive - Amplifier Overdrive/Distortion
Feedback - Hardwired Audio Out to External Input

POTS
33: 29 Full-Sized, 4 Shafted Minis

17 SPECIFICATIONS pg. 2

SWITCHES
31: 25 mini toggle, 6 Rotary Waveform/Range switches

PATCH POINTS
14 x 3.5 mm Front Panel mounted
7 Inputs: MAIN CV IN, OSC1 CV , OSC2 CV, OSC3 CV, EXT IN (with attenuation), VCF CV, GATE IN, VCA CV
7 Outputs: CV OUT, LFO OUT (with attenuation), NOISE, OSC1, ENV2 OUT (with attenuation), GATE OUT

AUDIO INPUT
1/8" Front Panel TS
Voltage: +10 millivolts (min); +10 volt (max); Nominal Input Impedance: 100K Ohms

AUDIO OUTPUT
1/4" Back Panel TS
Output Voltage (typical): 0.5 volts Maximum Voltage: 4.2 volts (peak-to-peak); Nominal Output Impedance: 3K Ohms

MIDI
IN & Thru (dIn)

DIMENSIONS
19" (48.26 cm) Wide x 6 1/8" (15.56 cm) Deep x 7.5" (19.05 cm) High - 4 rack spaces

WEIGHT
9 lbs / 4 kg

POWER
500 mA; 100 Volts to 240 Volts AC, 50/60 Hz Input

18 COMPARISON CHART

		MIDIMINI V30	MIDIMINI
SECTION	**FEATURE**		
CON	**GLIDE**	Linear, exponential—includes Filter—under more versatile software control.	Only exponential.
	NOISE - OSC3	Noise/Oscillator 3 Modmix selector switch.	Organized better on V30.
	CV OUT	Main Control Voltage Output patch point.	N/A
LFO	**VCF**	Voltage Controlled Filter Cutoff attenuator.	No Filter Cutoff modulation via Panel LFO.

		MIDIMINI V30	MIDIMINI
SECTION	**FEATURE**		
	WAVEFORM	SE-02/Boomstar-style Waveform shapes switch.	Triangle waveform.
	RATE	Audio Rate Modulation capable speed attenuator, with switchable MIDI SYNC.	Speed control only (no AFM).
	LFO OUT	Lo Frequency Oscillator Output patch point, with amount attenuator.	N/A (no patch points on Midimini)
OSCILLATORS	**MAIN CV IN**	Main Control Voltage Input patch point (-10 to +10, internal CV is +/-5v).	N/A
	OSC1 CV	OSC1 Control Voltage Input patch point—additive.	N/A
	OSC2 CV	OSC 2 Control Voltage Input patch point—additive.	N/A
	OSC3 CV	OSC 3 Control Voltage Input patch point—additive.	N/A
COLOR	**ENV1 to OSC2**	Cross-modulation of OSC 2 by ENV1 (filter) attenuator.	No independent control/combination, only switchable between ENV1 to OSC2 & OSC3 to OSC2.
	OSC3 to OSC2	Cross-modulation of OSC 2 by OSC 3 attenuator.	“
	RING MOD	Hardware Ringmod attenuator.	No Ringmod.
	NOISE	Noise Output patch point.	N/A
	OSC1	OSC1 Control Voltage Output patch point.	N/A
MIXER	**AMP DRIVE**	Boomstar Modular AMP module’s amplifier saturation & overdrive circuit.	N/A
	∧1 NO VCF	OSC 1 Triangle Wave to VCA switch —bypasses VCF.	N/A
	FBK GAIN	Feedback gain (not loop) control. Shares EXT IN pot.	N/A
	EXT IN	Front panel positioned External Audio Input jack.	Back Panel
FILTER/ MODIFIERS	**LEARN**	MIDI Channel, Aftertouch, and Modwheel control center.	Hardware MIDI switch.
	ENV1 INV	Filter Envelope inverter.	Custom mod.
	LFO GATE	Low Frequency Oscillator gate trigger of ENV1 and ENV2.	N/A

		MIDIMINI V30	MIDIMINI
SECTION	**FEATURE**		
	ENV2 MSTR	VCA Envelope override of VCF Envelope switch.	N/A
	VCF CV	Voltage Controlled Filter Control Voltage Input patch point.	N/A
	ENV2 OUT	Envelope 2 Output patch point, with amount attenuator.	N/A
	GATE IN	Gate In patch point.	N/A
	GATE OUT	Gate Out patch point (8.2 volts).	N/A
OUT	**FEEDBACK**	Synth Output to External Input Feedback loop control.	N/A
	REL1	Envelope 1 Release (Decay) switch.	N/A
	DRONE	Instant, indefinite VCA sustain switch.	N/A
	VCA CV	Voltage Control Amplifier patch point —disconnects ENV2.	N/A

19 LEGAL

LIABILITY

Neither Analogia Inc./Studio Electronics nor anyone else involved in the creation, production, or delivery of this product shall be liable for any direct, indirect, incidental, special, consequential or punitive damages whatsoever arising out of the use of this product, or inability to use this product; including without limitation: damages for loss of business, profits, goodwill, business interruption, loss of business information, data or any other pecuniary loss, even if Analogia Inc./Studio Electronics were previously advised of the possibility of such damages. Some states do not allow limitations on the length of an implied warranty, or the exclusion or limitation of incidental or consequential damages, so the above limitation and/or exclusions may not apply to you.

FCC

DO NOT MODIFY THE UNIT! This product, when installed as indicated in the instructions contained in this manual, meets FCC requirement. Modi cations not expressly approved by Analogia Inc./Studio Electronics may void your authority granted by the FCC, to use this product.

IMPORTANT: When connecting this product to accessories and/or another product, use only high quality shielded cables. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class “B” digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies, and if not installed and used according to the instructions specified in this product’s operation manual, may cause interference harmful to the operation of aforementioned other electronic devices.

Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference (which can be determined by turning the unit “OFF” and “ON”), please try to eliminate the problem by using one of the following measures:

• Relocate either this product or the device that is being affected by the interference.
• Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter(s).
• In the case of radio or TV interferences, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial cable.

• If these corrective measures do not bring any satis ed results, please consult the local retailer authorized to distribute this type of product. If you cannot locate the appropriate retailer, please contact Analogia inc. These **FCC** statements apply only to those products distributed in the USA.

CANADA

NOTICE: This class B digital apparatus meets all the requirements of the Canadian Interference-Causing Equipment Regulation.
AVIS: Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

EUROPE

NOTICE: This product complies with the requirements for European Directive 89/336/EEC.

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