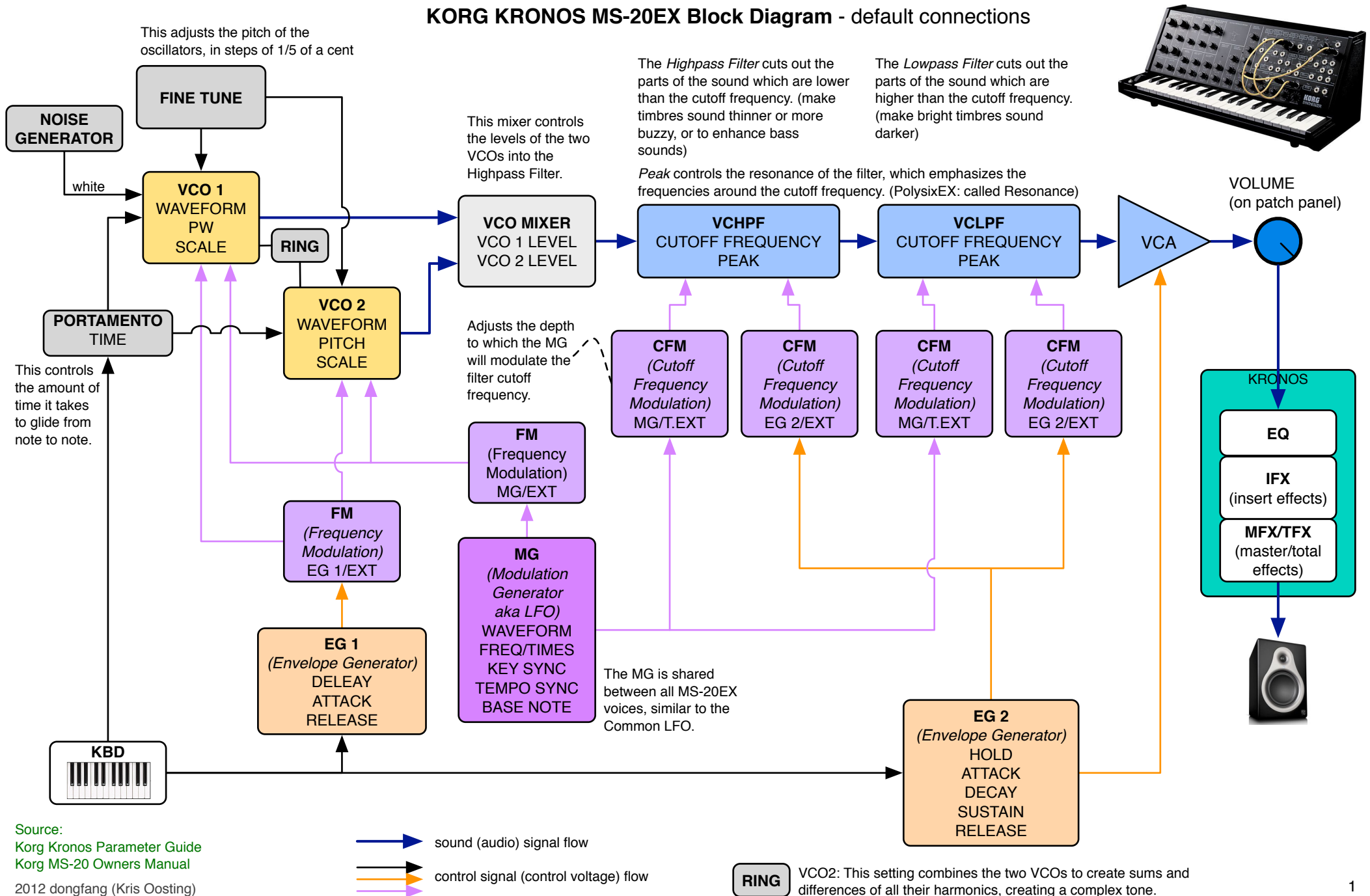


KORG KRONOS MS-20EX Block Diagram - default connections



KORG KRONOS MS-20EX Block Diagram - Basic Patch Panel

Legend:
 ○ Input connector
 ● Output connector

Components and Connections:

- FINE TUNE:** A knob that controls the frequency of VCO 1 and VCO 2.
- VCO 1 & VCO 2:** Voltage Controlled Oscillators. VCO 1 has a FINE TUNE input and an OUT. VCO 2 has an OUT.
- FM (Frequency Modulation):** A block with two inputs: MG/T.EXT and EG1/T.EXT. It has two outputs: TOTAL and FREQ.
- VCO MIXER:** A block that combines the outputs of VCO 1 and VCO 2. It has an EXT SIGNAL IN input and an OUT.
- HPF (High Pass Filter) & LPF (Low Pass Filter):** Filter blocks. HPF has an OUT and an IN. LPF has an OUT and an IN.
- CFM (Cutoff Frequency Modulation):** Two blocks, each with two inputs (MG/T.EXT and EG2/T.EXT) and an output (CUTOFF FREQ).
- VCA (Voltage Controlled Amplifier):** A block that controls the volume. It has an INITIAL GAIN input and a VOLUME knob. Its output is SIGNAL OUT.
- PORTAMENTO:** A section with a TIME knob and a KBD CV OUT output. It also has a KBD input and a TRIG OUT output.
- ENVELOPE GENERATOR 1 & 2:** Two blocks that generate envelopes. EG1 has a TRIG IN and a REV OUT. EG2 has a TRIG IN and a REV OUT.
- MODULATION GENERATOR:** A block that generates two basic waveforms. It has two outputs: OUT and REV OUT.
- SAMPLE & HOLD:** A block that can generate a stepped output from any varying input. It has an IN and an OUT.
- NOISE GENERATOR:** A block that generates PINK and WHITE noise. It has a VCO 1 input and a WHITE output.
- MIXER 1 & 2:** Two simple 2-in, 1-out mixers. Each has two inputs (IN A and IN B) and an output (OUT). They also have LEVEL A and LEVEL B controls.

Connections:

- FINE TUNE is connected to VCO 1 and VCO 2.
- VCO 1 OUT and VCO 2 OUT are connected to VCO MIXER.
- EXT SIGNAL IN is connected to VCO MIXER.
- VCO MIXER OUT is connected to HPF.
- HPF OUT is connected to LPF.
- LPF OUT is connected to VCA.
- INITIAL GAIN is connected to VCA.
- VCA output is SIGNAL OUT.
- PORTAMENTO TIME knob is connected to VCO 1 and VCO 2.
- KBD CV OUT is connected to PORTAMENTO.
- KBD is connected to PORTAMENTO.
- TRIG OUT is connected to PORTAMENTO.
- EG1 TRIG IN and EG2 TRIG IN are connected to PORTAMENTO.
- REV OUT of EG1 and EG2 are connected to MODULATION GENERATOR.
- MODULATION GENERATOR OUT and REV OUT are connected to SAMPLE & HOLD.
- CLOCK IN is connected to SAMPLE & HOLD.
- IN is connected to SAMPLE & HOLD.
- OUT of SAMPLE & HOLD is connected to VCO 1.
- CONTROL INPUT is connected to VCA.
- IN is connected to VCA.
- OUT of VCA is connected to VCO 1.
- PINK and WHITE noise outputs are connected to VCO 1.
- IN A and IN B of MIXER 1 and MIXER 2 are connected to VCO 1 and VCO 2.
- LEVEL A and LEVEL B of MIXER 1 and MIXER 2 are connected to VCO 1 and VCO 2.
- OUT of MIXER 1 and MIXER 2 are connected to VCO 1 and VCO 2.

Notes:

- Two basic waveforms that you can use both simultaneously.
- The SAMPLE & HOLD can generate a stepped output from any varying input. You can use this to create random filter or pitch effects, arpeggios, quantized LFOs or EGs, and so on.
- This is a second VCA, intended for scaling modulation signals. (Modulation VCA - MVCA)
- You can use these as sound sources or as modulation signals.
- This is a simple 2-in, 1-out mixer; you can use it for merging and scaling either control or audio signals. Note that you can also use this to invert the polarity of a signal.
- These are connected with the Mod Wheel and Mod Switch, or other AMS source.

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