

Mixfood Orange Sample-based Synth Manual



Mixfood Orange Sample-based Synth by
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Contents

Master section	3
Wheels	3
Master filter	3
Patch section	4
Master chorus	4
Master level	5
Oscillator 1 Oscillator general section	6
Filter 1	6
Haas effect	7
EQ	7
Chorus	8
Flanger	8
Delay	9
Lo-fi	9
Reverb	10
Filter 2	10
LFO 1	11
Filter envelope	13
Amp envelope	13
Oscillator 2 Oscillator general section	15
Phaser	15
Oscillator 3 Oscillator general section	16
Overdrive	16
General descriptions and more information	17
The backside: Separate audio-out explained	18

Master section



Pitch bend wheel

The Pitch Bend wheel is used for "bending" notes. The range parameter sets the amount of pitch bend when the wheel is turned fully up or down. The maximum range is "12" (up or down 1 Octave).

Pitchbend range

Set pitchbend range to + or - 12 semitones (1 octave)

Modulation wheel

Modulate the filter 1 cutoff frequency (by setting the "cutoff" knob) or the filter 1 resonance (by setting the "resonance" knob) (affects all oscillators at once).

Modwheel filter cutoff

This sets modwheel control of the filter 1 cutoff parameter.

A positive value will increase the frequency if the wheel is pushed forward.

Negative values invert this relationship. Only filters 1 are affected of oscillator 1-3.

Modwheel filter resonance

This sets modwheel control of the filter 1 resonance parameter.

A positive value will increase the percentage if the wheel is pushed forward.

Negative values invert this relationship. Only filters 1 are affected of oscillator 1-3.



Master Filter type

With this control you can set the Master filter to operate as one of 6 different types of filter.

Low pass 12, Low pass 24, Low pass +, Band pass 6, High pass 12, High pass +.

Master filter cutoff

The cutoff parameter determines which area of the frequency spectrum the Master filter will operate in.

Master filter resonance

The filter resonance parameter is used to set the Master filter characteristic, or quality.



Logo, Mixfood Orange Sample-based synth

Created by Bou for Studio Corbach, www.studiocorbach.nl.

Note On indicator

Lights up every time a key is pressed, a note is received.

Monophonic polyphonic switch

Set Mixfood Orange Sample-based Synth to monophonic (play only one note at a time) or polyphonic (play multiple notes simultaneously, like a chord).

Glide

Modify the amount of glide used to reach the final pitch of a note when playing notes after each other. The pitch "glides" between the notes you play, instead of instantly changing the pitch.

Patch load and save section

Load, save and browse through patches and show the patch name of the currently load patch.



Master chorus voices

Set the number of chorus voices.

Master chorus rate

Set the rate of the modulation delay time, the higher the value, the faster the sound will oscillate.

Master chorus depth

Set the depth of the modulation delay time, how much the delay time should be modulated. In combination with the delay knob, the effect will be "frozen" (turn the mix knob up the hear the effect better).

Master delay

Set the delay time of the chorus effect.

Master Chorus mix

Adjust the balance between the unprocessed (dry) signal and the chorus effect (wet).

**Master Level**

Set the output level of the device.

Oscillator 1



Oscillator 1 on/off

On/off switch for Oscillator 1

Waveform selector oscillator 1

Select one of 154 waveforms for oscillator 1.

Fine-tune oscillator 1

Raise or lower the tuning, changing the frequency of oscillator 1 from -50 to +50 cents (100th of a semitone). That's down or up half a semitone.

Semitone tuning oscillator 1

Raise or lower the tuning, changing the frequency of oscillator 1, in 24 semitone steps (2 octaves).

Panning oscillator 1

Panning control for the unprocessed (dry) signal of the oscillator.

Volume oscillator 1

Set the output level, volume, of oscillator 1

Filter 1 type oscillator 1

With this control you can set filter 1 to operate as one of 5 different types of filter.

Low pass 12, Low pass 24, Band pass 6, High pass 12 and Ringmodulation.

Filter 1 cutoff oscillator 1

The cutoff parameter determines which area of the frequency spectrum the filter 1 will operate in.

Filter 1 resonance oscillator 1

The filter resonance parameter is used to set the filter 1 characteristic, or quality.





Haas effect On/Off oscillator 1

Turn on or off the Haas effect on oscillator 1.

Haas effect swap oscillator 1

Swap the Haas (delay) effect from left to right. Default the left channel is delayed.

Haas effect width oscillator 1

Set the width (delay-time) of the Haas effect.



EQ low gain oscillator 1

Specifies how much the level of the low frequency range should be boosted or cut.

EQ low frequency oscillator 1

This determines the center frequency of the low EQ, i.e. at which frequency the level should be decreased or increased.

EQ mid gain oscillator 1

Specifies how much the level of the mid frequency range should be boosted or cut.

EQ mid frequency oscillator 1

This determines the center frequency of the mid EQ, i.e. at which frequency the level should be decreased or increased.

EQ mid Q oscillator 1

This governs the width of the affected area around the set center frequency. The lower the value, the narrower the affected frequency range.

EQ high gain oscillator 1

Specifies how much the level of the high frequency range should be boosted or cut.

EQ high frequency oscillator 1

This determines the center frequency of the high EQ, i.e. at which frequency the level should be decreased or increased.



Chorus voices oscillator 1

Set the number of chorus voices.

Chorus rate oscillator 1

Set the rate of the modulation delay time, the higher the value, the faster the sound will oscillate.

Chorus depth oscillator 1

Set the depth of the modulation delay time, how much the delay time should be modulated. In combination with the delay knob, the effect will be "frozen" (turn the mix knob up the hear the effect better).

Chorus delay time oscillator 1

Set the delay time of the chorus effect.

Chorus mix oscillator 1

Set the balance between the unprocessed (dry) signal and the effect (wet) signal.



Flanger rate oscillator 1

Set the modulation rate.

Flanger depth oscillator 1

Set the depth of the modulation, by how much the delay time should be modulated.

Flanger delay oscillator 1

Set the delay time of flanger effect, a flanger effect uses a short delay time.

Flanger Phase oscillator 1

Set the phase offset between the left and right modulation. This produces a sort of panning-like effect.

Flanger feedback oscillator 1

Set the amount of effected signal to be fed back to the input. This affects the intensity and character of the effect.

Flanger mix oscillator 1

Set the balance between the unprocessed (dry) signal and the effect (wet) signal.



Delay mode oscillator 1

Sets which channel(s) feedback is taken from.

Delay sync (to the beat) On/Off oscillator 1

Turn on to synchronize the delay time (delay signal) with the beat, or turn off to set the delay time in milliseconds.

Delay panning oscillator 1

Pans the delay effect to the left or to the right. Create interesting effects by setting different delay modes.

Delay time oscillator 1

Set the delay time in sync mode (synced to the beat) or in milliseconds (by switching on or off the sync button).

Delay feedback oscillator 1

Set the number of delay-repeats (how long the delay continues to sound).

Delay mix oscillator 1

Set the balance between the unprocessed (dry) signal and the effect (wet) signal.



Lo-fi sample rate oscillator 1

Down sampling rate. The lo-fi effect is emulating degraded audio quality (Down sample/Rate Crusher).

Lo-fi jitter oscillator 1

Set the random modulation of the down sampling rate.

Lo-fi mix oscillator 1

Set the balance between the unprocessed (dry) signal and the effect (wet) signal.



Reverb low cutoff oscillator 1

Low pass filter cutoff frequency, lower it to get more low frequencies in the reverb signal.

Reverb high cutoff oscillator 1

High pass filter cutoff frequency, raise it to get more high frequencies in the reverb signal.

Reverb damping oscillator 1

Damping of the reverb signal (progressive loss of high frequencies in reverb tail).

Reverb time oscillator 1

Set the length of the "reverb tail".

Reverb pre-delay oscillator 1

Set the pre-delay time, the initial delay before reverb.

Reverb mix oscillator 1

Set the balance between the unprocessed (dry) signal and the effect (wet) signal.



Filter 2 type oscillator 1

With this control you can set filter 2 to operate as one of 6 different types of filter. Low pass 12, Low pass 24, Low pass +, Band pass 6, High pass 12, High pass +.

Filter 2 cutoff oscillator 1

The cutoff parameter determines which area of the frequency spectrum the filter 2 will operate in.

Filter 2 resonance oscillator 1

The filter resonance parameter is used to set the filter 2 characteristic, or quality.



LFO waveform oscillator 1

Set the waveform the LFO uses to modulate the chosen parameter(s).

LFO sync (to the beat) On/Off oscillator 1

Set the (modulation) rate units to beats, quarter notes per cycle when sync is ON. Set the (modulation) rate units to Hz, cycles per second when sync is OFF.

LFO retrigger On/Off oscillator 1

When Off, all voices will be modulated together in sync. When On, the LFO for each voice starts from the beginning when the note is triggered

LFO Rate oscillator 1

Set the LFO's frequency. The modulation frequency can be synced to the beat or in milliseconds (by switching on or off the sync button).

LFO Start Phase oscillator 1

This shifts the starting point in the LFO waveform. It is most useful when retrigger is off and sync is set to ON. Then it adjusts the alignment of the LFO waveform relative to beats on the song timeline.

LFO tune depth oscillator 1

Make the LFO modulate the tuning(pitch) of oscillator 1.

Set the depth to positive to control the amount of modulation on the signal (increase the tuning parameter). When set to a negative value, control the modulation amount but the modulation will be inverted (reduce the tuning parameter).

100% pitch modulation = 1 octave.

LFO tune smooth oscillator 1

Makes the modulation effect smoother, smooth the parameter changes.

LFO volume depth oscillator 1

Make the LFO modulate the volume of oscillator 1.

Set the depth to positive to control the amount of modulation on the signal (increase the volume parameter). When set to a negative value, control the modulation amount but the modulation will be inverted (reduce the volume parameter).

100% volume modulation = no volume.

LFO volume smooth oscillator 1

Makes the modulation effect smoother, smooth the parameter changes.

LFO panning depth oscillator 1

Make the LFO modulate the panning of oscillator 1.

Set the depth to positive to control the amount of modulation on the signal (right to left)

When set to a negative value, control the modulation amount but the modulation will be inverted (left to right).

100% panning modulation = completely right or left.

LFO panning smooth oscillator 1

Makes the modulation effect smoother, smooth the parameter changes.

LFO filter cutoff depth oscillator 1

Make the LFO modulate the cutoff of filter 1 of oscillator 1.

Set the depth to positive to control the amount of modulation on the signal (increase the filter cutoff frequency)

When set to a negative value, control the modulation amount but the modulation will be inverted (decrease the filter cutoff frequency).

100% filter cutoff modulation = 25kHz.

LFO filter cutoff smooth oscillator 1

Makes the modulation effect smoother, smooth the parameter changes.

LFO filter resonance depth oscillator 1

Make the LFO modulate the resonance of filter 1 of oscillator 1.

Set the depth to positive to control the amount of modulation on the signal (increase the filter resonance percentage)

When set to a negative value, control the modulation amount but the modulation will be inverted (decrease the filter resonance percentage).

100% filter resonance modulation = 100% resonance.

LFO filter resonance smooth oscillator 1

Makes the modulation effect smoother, smooth the parameter changes.



Filter envelope attack oscillator 1

Set the attack time for initial run-up of the filter(envelope) from nil to peak, beginning when the key is first pressed.

Filter envelope decay oscillator 1

Set the time taken for the subsequent run down from the attack level to the designated sustain level.

After the maximum value has been reached, the value starts to drop. How long this should take is determined by the decay parameter.

Filter envelope sustain oscillator 1

Set the level the envelope should "rest at" after the decay until the key is released.

Filter envelope release oscillator 1

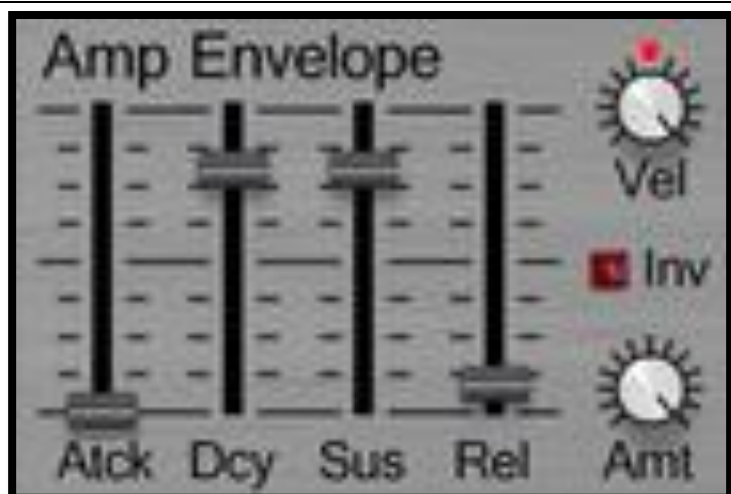
Set the time it takes for the value to fall back to zero after releasing the key.

Filter envelope amount oscillator 1

Set the degree (amount) the filter will be affected by the filter envelope.

Filter envelope invert oscillator 1

If active, the filter envelope will be inverted.



Amp envelope attack oscillator 1

Set the attack time for initial run-up of volume from nil to peak, beginning when the key is first pressed.

Amp envelope decay oscillator 1

Set the time taken for the subsequent run down from the attack level to the designated sustain level.

After the maximum value has been reached, the value starts to drop. How long this should take is determined by the decay parameter.

Amp envelope sustain oscillator 1

Set the level the envelope should "rest at" after the decay until the key is released.

Amp envelope release oscillator 1

Set the time it takes for the value/volume to fall back to zero after releasing the key.

Velocity oscillator 1

Control how velocity is translated to the synthesizer. Velocity is how hard or soft you play notes on your keyboard.

When velocity is set to 100%, full advantage can be taken from pressure-sensitive keyboards, or use other creative ways to make

	use of velocity settings (like letting it control the amount of cutoff, or some other parameter).
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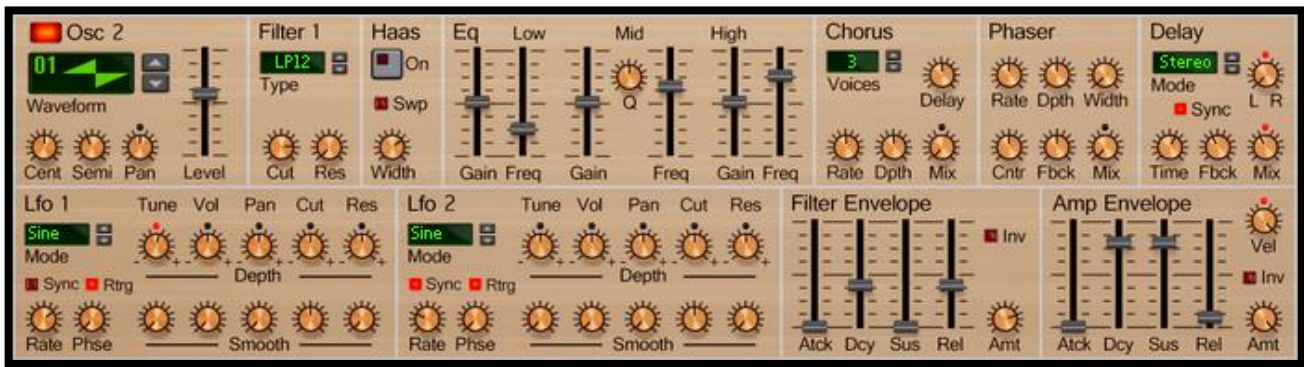
Amp envelope amount oscillator 1

Set the degree (amount) the volume will be affected by the amp envelope.

Amp envelope invert oscillator 1

If active, the amp envelope will be inverted.

Oscillator 2



Oscillator 2 is almost the same as oscillator 1 and 3, therefore only the new items will be described here. For the other descriptions, see oscillator 1.



Phaser rate oscillator 2

Set the speed of the effect modulating the frequency parameter. The higher the value, the faster the phaser sweeps.

Phaser depth oscillator 2

Set the depth of the frequency modulation, by how much the frequency parameter should be modulated. When turned to zero, the effect will be a static, formant-like sound (add a little feedback to hear the effect).

Phaser width oscillator 2

Set the offset between left and right center frequencies. This is a panning like addition to the affected signal.

Phaser center oscillator 2

Set the center frequency the effect will modulate to create phase sweeps.

Phaser feedback oscillator 2

Set the amount of effected signal to be fed back to the input.

This affects the intensity and character of the “tone” in the effect, similar to the resonance control on a filter.

Phaser mix oscillator 2

Set the balance between the unprocessed (dry) signal and the effect (wet) signal.

Oscillator 3



Oscillator 3 is almost the same as oscillator 1 and 2, therefore only the new items will be described here. For the other descriptions, see oscillator 1.



Overdrive mode oscillator 3

A (mono) overdrive effect with effect algorithms taken from the Scream 4 device in Reason. Modes included are:

Overdrive This produces an analog-type overdrive effect. Overdrive is quite responsive to varying dynamics. Use lower 'drive' control settings for more subtle "crunch" effects.

Scream Similar to Fuzz, but with a bandpass filter with high resonance and gain settings placed before the distortion stage.

Fuzz This produces a bright and distorted sound even at low Damage Control settings.

Overdrive presence oscillator 3

Boosts frequencies in the high midrange before the distortion stage which in turn affects the character of the distortion. Turn clockwise for more Presence boost.

Overdrive tone oscillator 3

Controls the basic tone of the effect. Turn clockwise for a brighter sound.

Overdrive drive oscillator 3

This controls the input gain which in turn determines the amount of damage inflicted. The higher the value, the more destruction! When raising the Damage Control you may need to lower the Master level to maintain the same output level (and vice versa).

General descriptions and more information

Links to other resources. Here you can find all the info on the various parts of the Mixfood Orange Sample-based synth. General descriptions of the effect used in this device. Also a link to the Reason documentation, because all the effects used on this device are standard Reason effects.

http://cdn.propellerheads.se/Reason8/Manuals/Reason_82_Operation_Manual.pdf

Filters

<https://www.youtube.com/watch?v=LkNAB8MC0b0>

<https://www.youtube.com/watch?v=7T4U4dbIcH8>

https://www.youtube.com/watch?v=XA_WnyA7D6k

http://en.wikipedia.org/wiki/Audio_filter

<http://www.soundonsound.com/sos/jul01/articles/equalisers1.asp>

Haas Effect

http://en.wikipedia.org/wiki/Precedence_effect

EQ

<http://www.mediacollege.com/audio/eq/>

<http://www.soundonsound.com/sos/jul01/articles/equalisers1.asp>

<http://audiogeekzine.com/2008/10/audio-effects-explained-series-part-3-eq-and-filters/>

Chorus

<http://www.mediacollege.com/audio/effects/chorus/>

<http://testtone.com/fundamentals/what-chorus-effect>

http://en.wikipedia.org/wiki/Chorus_effect

<http://makingmusicmag.com/difference-between-phase-flanger-and-chorus-effect/>

Flanger

<http://www.mediacollege.com/audio/effects/flange/>

<http://makingmusicmag.com/difference-between-phase-flanger-and-chorus-effect/>

Phaser

<http://www.mediacollege.com/audio/effects/phase-shift/>

<http://makingmusicmag.com/difference-between-phase-flanger-and-chorus-effect/>

Delay

[http://en.wikipedia.org/wiki/Delay_\(audio_effect\)](http://en.wikipedia.org/wiki/Delay_(audio_effect))

<http://www.musicradar.com/tuition/tech/the-ultimate-guide-to-effects-delay-457920/>

Reverb

<http://www.mediacollege.com/audio/reverb/>

Overdrive

http://en.wikipedia.org/wiki/Distortion_%28music%29

LFO

<https://www.youtube.com/watch?v=YEHnd9b79Uc>

Envelope

<https://www.youtube.com/watch?v=A6pp6OMU5r8>

<https://www.youtube.com/watch?v=9niampRkFW0>

<https://www.youtube.com/watch?v=Q-ot9AaJx-Y>

Pitch bend and Modulation wheel

<https://www.youtube.com/watch?v=bSYIk2yLft0>

The backside: Separate audio-out explained

With a few images I would like to explain the audio output options.

Default setup (wet signal, all oscillators 1 audio output) 1 signal:



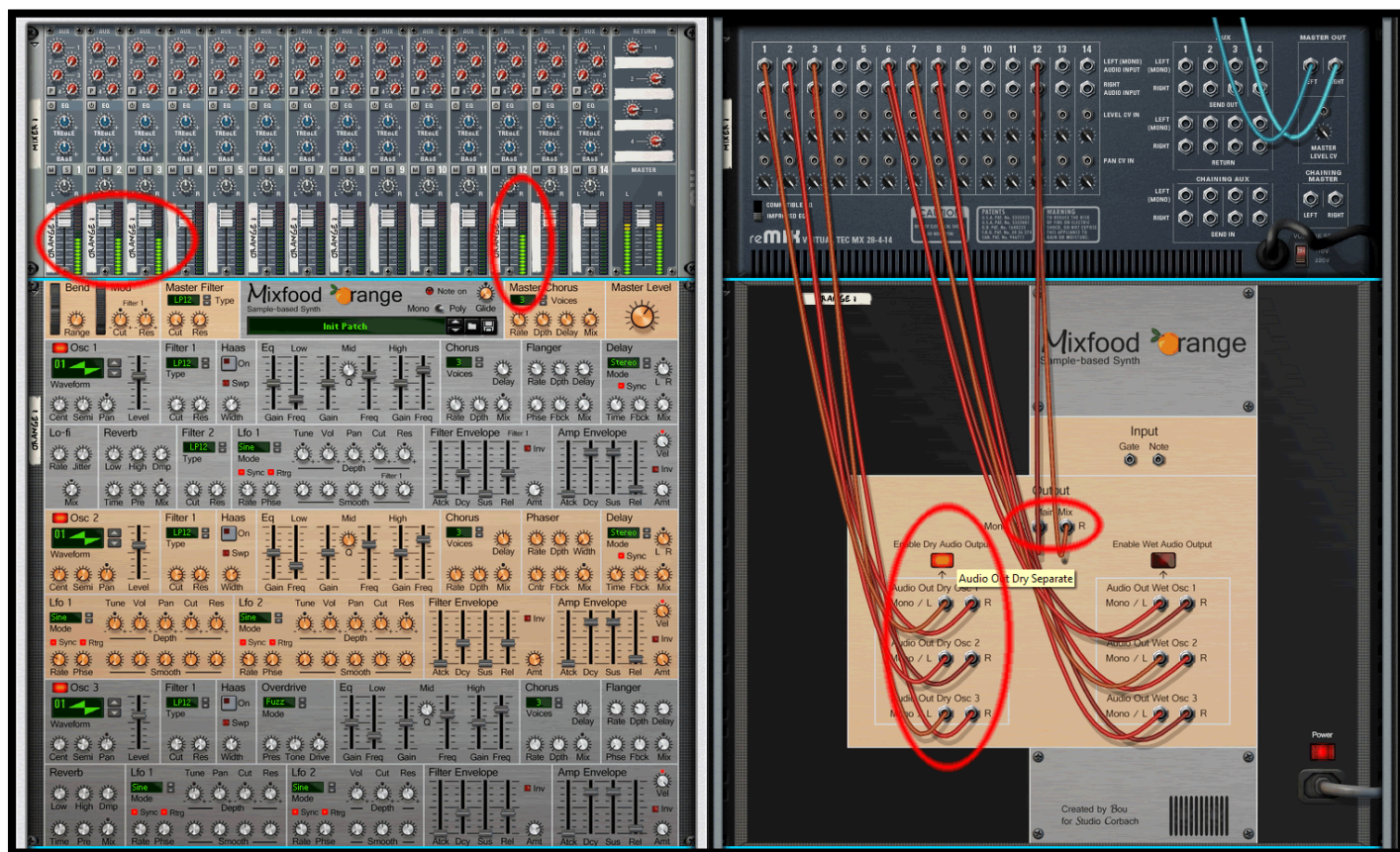
Dry signal only (each oscillator separate) 3 signals:



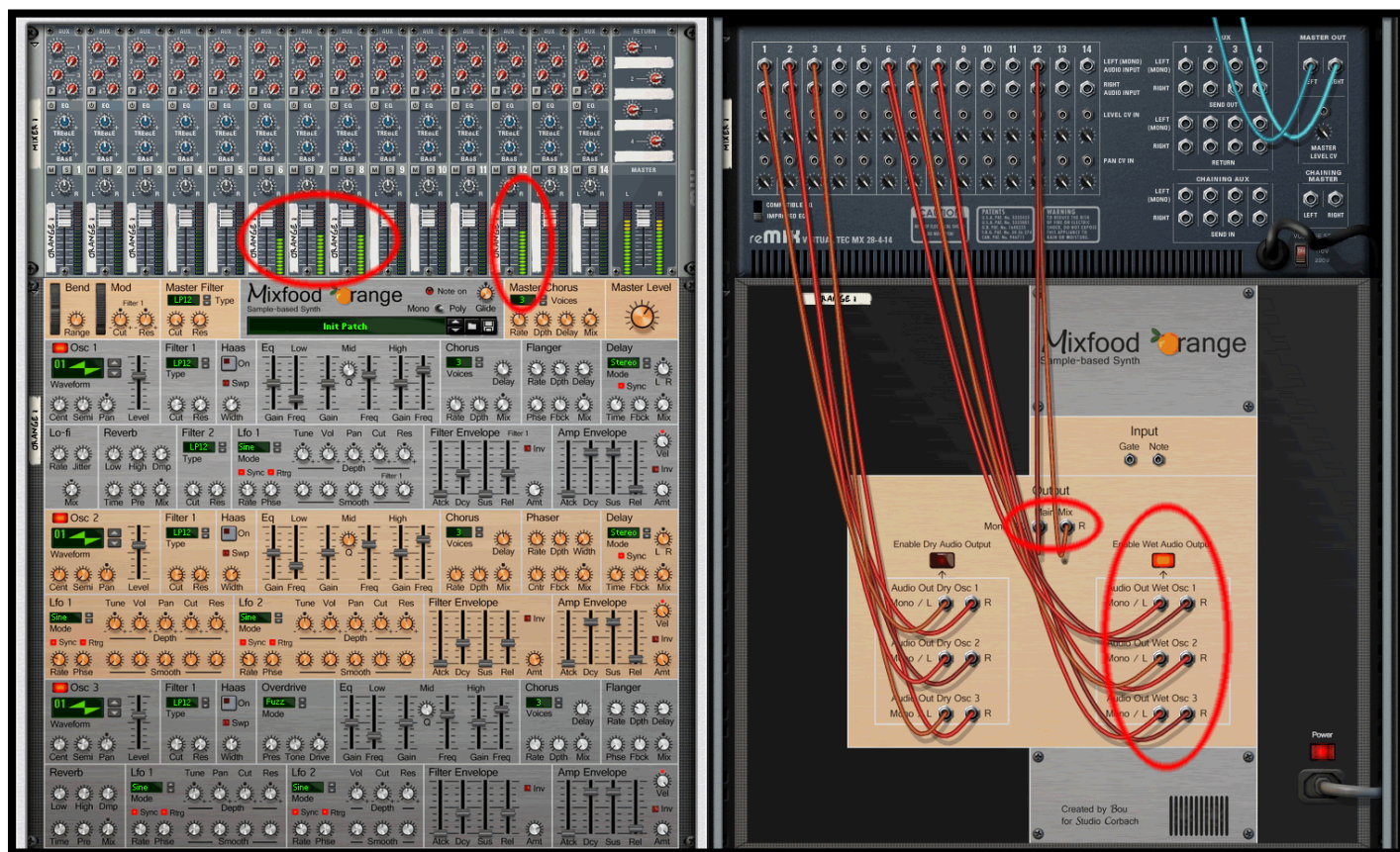
Wet signal only (each oscillator separate) 3 signals:



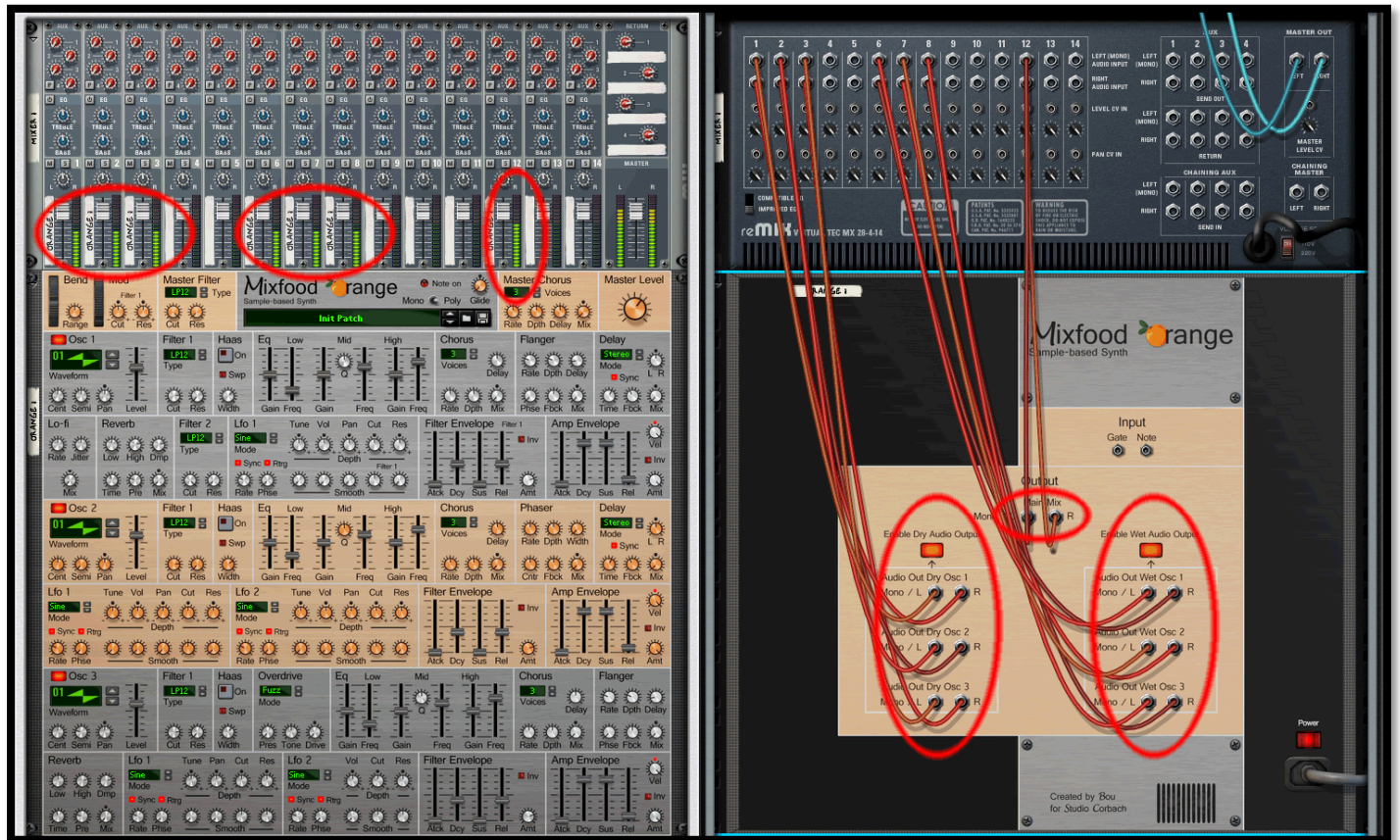
Main mix + DRY signal (each oscillator separate + main mix) 4 signals:
 wet cables are attached but the audio outputs are set to off!



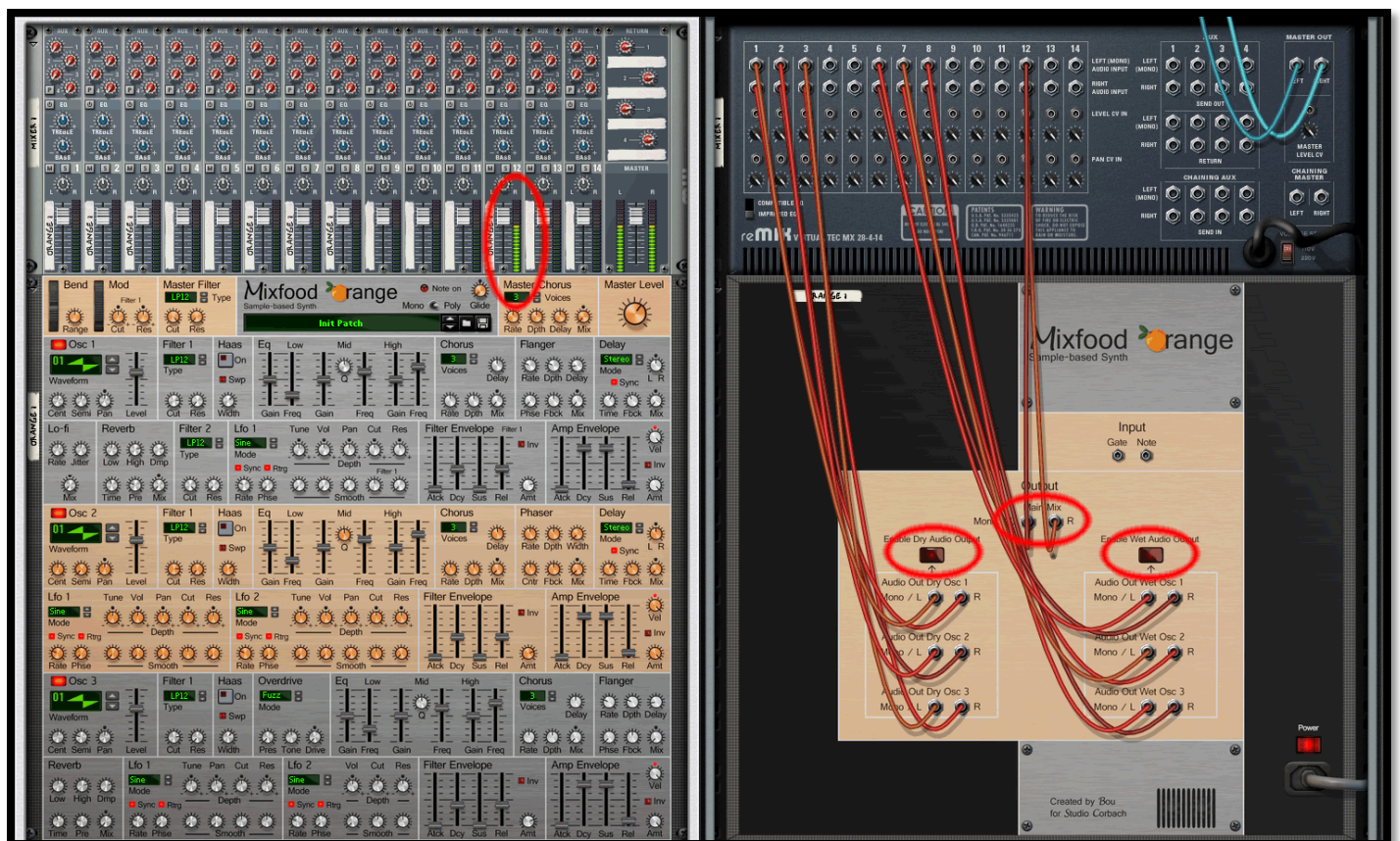
Main mix + WET signal (each oscillator separate + main mix) 4 signals:
dry cables are attached but the audio outputs are set to off!



Main mix + WET signal + DRY signal(each oscillator separate + main mix) 7 signals:



Main mix only (cabels are attached but audio outputs are not turned on!) 1 signal:



Main mix + WET signal + DRY signal (because the audio outputs are still turned on all signals go to the attached cables). You DON'T want this setup!

