Ghostwave Audio

MixRight

OPERATION MANUAL
v1.6

Foreword

Thank you for purchasing MixRight!

In this manual, you will find all the information regarding the installation, features and use of MixRight.

MixRight is a Native Instruments Reaktor 5 ensemble designed as an easy way to compare your current mix with the reference track of your choice.

In only one click, you can alternate between the two tracks to compare levels, phase correlation and frequency distribution and therefore find out the necessary adjustments for your current mix.

Since the CPU-hit is very low, you can use it on the master bus as well as on individual tracks or busses.

Requirement and installation

MixRight requires the full version of Native Instruments Reaktor 5.9.2 (or later versions) and, as a consequence, will *not* work with the free Reaktor Player.

To install it, simply copy the MixRight.ens ensemble into the location of your choice and open it from inside Reaktor. I suggest you copy it into the default "Ensembles" location, and create a subfolder named "Utilities".

User Interface

1. This is the waveform of the reference track, which also features the graphical representation of the loop points and of the playing location.

2. Waveform zoom and scrollbar. If the loop is short, you might want to zoom in on it. For this, click on the "+" button as many times as necessary and navigate the waveform with the scrollbar. To zoom back out, simply use the "-" button.

3. This is the phrase correlation scope, which indicates the distribution over the stereo field. (mix track only)

4. Phase correlation on/off switch.

5. Loop control functions. *Track* defines the file to be used as reference if multiple files have been loaded in the sample map. *Start* defines where the loop will start, *length* defines the length of

the loop and *reset* restarts the loop from the beginning. This button is important if you want to listen to new start/length settings immediately.

6. Restart on play. By default, MixRight will keep playing the reference track internally, even when you are not playing your current mix. By toggling on this button, the loop will restart every time you hit play in your host, synchronising the two tracks.

7. Bypass play sync. By default, MixRight's output is muted when your host is not playing anything. By toggling this on, you unmute the output. See the tips section to find out how this can be useful.

8. A/B switch. Use this to alternate between the main mix and the reference tracks.

9. -6 dB to reference track. When mixing, it is recommended to leave enough headroom for the mastering process. So if you are using MixRight at the mixing process, it is best to engage this button so you can compare your mix with quieter reference track.

10. Level meters. The one on the left is for the reference track and the one on the right is for the current mix. Both keep analysing the levels regardless of which track is engaged.

11. Output knob. Controls the overall level of the output, making it possible to listen to the tracks at a lower level without modifying any other plug-in settings or faders in your host. Range is -50 dB to 0 dB as reflected by the display.

12. Spectrum analyser for the reference track. Shows the frequency distribution of the track currently playing. It is divided into 125 bands.

13. Spectrum analyser on/off switch for the reference track. Disabling the analyser will save about 25% CPU.

14. Analyser y-axis zoom. When the general output is low, the analyzer will lack definition at very low levels. To compensate for that, simply turn this knob up to zoom in. This knob is tied to both analyzers.

15. Update rate. This knob controls how fast the frequency analyser will react to the incoming audio. Turned left, it will give you a good indication of its average frequency content over a long period (good for mastering) while turned right, this content will be averaged over a very short period (good for mixing). This knob is tied to both analyzers.

16. Spectrum analyser for the mix track. It works just like the one for the reference track.

17. Spectrum analyser on/off switch for the mix track. Identical to the one for the reference track.

Typical use

MixRight originates from my need for an easy way to compare final mixes with some of my favourite commercial tracks.

So instead of setting up reference tracks in my host, which have to be muted/solo'd all the time, I used the powerful Reaktor environment to make the workflow a lot more simple.

The example below shows how to use MixRight on the master bus but the procedure for other tracks/busses is exactly the same.

1. Load Reaktor 5 FX into the last slot of your master bus.
2. Navigate inside Reaktor and open the MixRight ensemble.
3. Click on the structure icon if it's not on already and make sure that *panel* is selected.

4. *Right-click in the waveform display and select Add sample.*
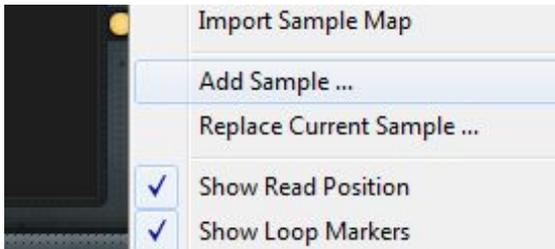
(note that for the display to work properly, the "Show Read Position" and "Show Loop Markers" have to be ticked)

5. Choose the track of your choice (.wav. aif and .aiff formats only) and it will load into MixRight.
6. Open the sample map (menu > view > show sample map editor), make sure the track you just loaded is selected, check that the root pitch is 0 (if it's different, change it manually), select the waveform panel at the bottom and engage the loop function.

 then

7. Add more reference tracks as needed by clicking the "add" button at the bottol left of the sample map editor. Make sure track 2 has root set to 1, track 3 root set to 2 ... Don't forget to loop them as shown in step 6. Those tracks will selectable by rotating the *Track* knob in the MixRight interface. (up to 10 by default)
8. You can now close the structure view (toggle off the button in step 3) and the sample map.
9. Click on the *REF ON* switch (number 8 on page 2 of this manual)
10. When you hit play in your host, you should hear the reference track.
    Note: when you stop the playback in your host, MixRight will mute its output but the reference track will keep playing internally. I made that choice so that the part your listen to when you hit play again is never exactly the same, making track comparison less repetitive. However, this behaviour can be changed with the *restart on play* and *bypass play sync* buttons.

11. Set the loop points where you want them then click on *reset* or wait until the end of the loop.
12. Use the REF ON switch to alternate between the reference mix and your own mix.

Useful tips

- MixRight can be used as a regular analyser when programming sounds in a synth, testing microphones, checking your guitar tone, etc. You can therefore monitor the level, phase correlation and frequency distribution of any sound.
    For this, load MixRight on the relevant track without loading any reference file.

- If you regularly use certain tracks, a good idea is to check the "embed" box in the sample editor for each loaded track and then save the entire ensemble under a different name, for example MixRight – Custom.ens. That way, the tracks will be saved with the ensemble and can be recalled instantly. By default, MixRight is set up to be used with a maximum of ten simultaneous reference tracks. If you need more than that, you need to go into the structure view and change the maximum value for the *Tracks* knob.

- The ranges of the *start* and *length* knobs have been set for a roughly 4-minute track.
    If they are too wide or narrow, you can edit them yourself:
1. On the MixRight panel, right-click on the knob you want to edit and select *Show in Structure*.
2. In the left-hand panel, select the rightmost tab (*Properties*, the one with the checkbox).
3. Click on the *function* button.
4. Edit the range *min* and *max* values until satisfied.

- If you need help understanding the interface a little better, the information about the different functions can be accessed by toggling tooltips on in Reaktor (menu > view > show info hints) and hovering the mouse over the controls and displays.

Troubleshooting

If the audio file does not play correctly, make sure the root pitch of your first reference track is set to 0 (you can view/edit it in the sample map). This is very important as any other root pitch will not play your file correctly.

Support

If you have any questions or need support, please contact me at ghostwaveaudio@outlook.com

Happy mixing!
Vincent Bastiat

MixRight version history

09/09/2015 - v1.6

Changes:

       - Updated GUI for better legibility

       - Second spectrum analyzer added

       - Track selection knob added for easy use with multiple reference tracks.

       - User Manual revised

27/10/2014 - v1.5

Changes:

       - Updated GUI with more contrast for better legibility

       - Spectrum analyzer extended to 20 kHz (instead of 14)

       - User Manual revised

Fixes:

       - Spectrum analyzer zoom default setting which prevented the quietest frequencies from being displayed

       - Scale on the spectrum analyzer and correlation meter

       - Scale on the update rate knob

24/12/2013 - v1.4

Changes:

       - Update rate knob added

29/08/2013 - v1.3

Changes:

       - Button to decrease the level of the reference track by 6 dB added

       - Scale on the spectrum analyser added

       - Manual revised

14/07/2013 - v1.2

Changes:

       - Reaktor 5.8 required

       - Automatic pitch in the sample set to 0

       - User Manual revised

12/07/2013 - v1.1

Changes:

       - New GUI implemented

       - Restart on play switch added

       - Bypass play sync switch added

- Individual headers removed
- Description for toolips added

09/07/2013 - v1.01

Changes:
- Improved GUI
- Renamed power button
- 2 redundant modules removed
- Minimum loop length increased to 4000
- Manual updated

03/07/2013 - v1.00

Initial release